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*e-Hardcopy 2.0*  
*Automated Report*

### Technical Report for

Cape Environmental Management Inc.

OB/OD Site I, OB Site II, Fort Bliss, TX

SGS Accutest Job Number: FA42152

Sampling Dates: 03/15/17 - 03/16/17

Report to:

Cape Environmental Mangement Inc.

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ATTN: (b) (6)

Total number of pages in report: 383



Test results contained within this data package meet the requirements  
of the National Environmental Laboratory Accreditation Program  
and/or state specific certification programs as applicable.

(b) (6)

Client Service contact: (b) (6)

Certifications: FL(E83510), LA(03051), KS(E-10327), IL(200063), NC(573), NJ(FL002), NY(12022), SC(96038001)  
DoD ELAP(L-A-B L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177),  
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Test results relate only to samples analyzed.



April 8, 2017

(b) (6)  
Cape Inc.  
500 Pinnacle Ct  
Norcross, GA 30071

RE: SGS Accutest job FA42152 Reissue

Dear (b) (6),

The final report for job number FA42152 has been edited to reflect requested corrections. These edits have been incorporated into the revised report.

The report has been changed to the DL/LOD/LOQ format.

SGS Accutest apologies for any inconvenience this may have caused. Please feel free to contact us if we can be of further assistance.

Sincerely,

SGS Accutest Orlando

Florida ♦ 4405 Vineland Road ♦ Suite C-15 ♦ Orlando, FL 32811 ♦ tel: 407 425-6700 ♦ fax: 407 425-0707 ♦ <http://www.sgs.com>

# Table of Contents

-1-

<b>Section 1: Sample Summary .....</b>	<b>5</b>
<b>Section 2: Case Narrative/Conformance Summary .....</b>	<b>7</b>
<b>Section 3: Summary of Hits .....</b>	<b>9</b>
<b>Section 4: Sample Results .....</b>	<b>12</b>
<b>4.1:</b> FA42152-1: OBOD1-SU08-SS-01 .....	13
<b>4.2:</b> FA42152-1A: OBOD1-SU08-SS-01 .....	16
<b>4.3:</b> FA42152-2: OBOD1-SU08-SS-02 .....	17
<b>4.4:</b> FA42152-2A: OBOD1-SU08-SS-02 .....	20
<b>4.5:</b> FA42152-3: OBOD1-SU08-SS-03 .....	21
<b>4.6:</b> FA42152-3A: OBOD1-SU08-SS-03 .....	24
<b>4.7:</b> FA42152-4: OB2-SU01-SS-01 .....	25
<b>4.8:</b> FA42152-5: OB2-SU01-SS-02 .....	26
<b>4.9:</b> FA42152-6: OB2-SU01-SS-03 .....	27
<b>4.10:</b> FA42152-7: OB2-SU02-SS-01 .....	28
<b>4.11:</b> FA42152-8: OB2-SU03-SS-01 .....	29
<b>4.12:</b> FA42152-9: OBOD1-SU09-SS-01 .....	30
<b>4.13:</b> FA42152-9A: OBOD1-SU09-SS-01 .....	33
<b>Section 5: Misc. Forms .....</b>	<b>34</b>
<b>5.1:</b> Chain of Custody .....	35
<b>5.2:</b> QC Evaluation: DOD QSM5 Limits .....	38
<b>Section 6: GC/MS Semi-volatiles - QC Data Summaries .....</b>	<b>43</b>
<b>6.1:</b> Method Blank Summary .....	44
<b>6.2:</b> Blank Spike Summary .....	45
<b>6.3:</b> Matrix Spike/Matrix Spike Duplicate Summary .....	46
<b>6.4:</b> Instrument Performance Checks (DFTPP) .....	47
<b>6.5:</b> Internal Standard Area Summaries .....	51
<b>6.6:</b> Surrogate Recovery Summaries .....	53
<b>6.7:</b> Initial and Continuing Calibration Summaries .....	54
<b>Section 7: GC/MS Semi-volatiles - Raw Data .....</b>	<b>62</b>
<b>7.1:</b> Samples .....	63
<b>7.2:</b> Method Blanks .....	120
<b>7.3:</b> Blank Spikes .....	122
<b>7.4:</b> Matrix Spike/Matrix Spike Duplicates .....	124
<b>7.5:</b> Instrument Performance Checks (DFTPP) .....	128
<b>7.6:</b> Initial and Continuing Calibrations .....	130
<b>7.7:</b> Instrument Run Logs .....	152
<b>7.8:</b> Prep Logs .....	156
<b>Section 8: GC Semi-volatiles - QC Data Summaries .....</b>	<b>157</b>
<b>8.1:</b> Method Blank Summary .....	158
<b>8.2:</b> Blank Spike Summary .....	159
<b>8.3:</b> Laboratory Control Sample Summary .....	160
<b>8.4:</b> Matrix Spike/Matrix Spike Duplicate Summary .....	161

# Table of Contents

-2-

<b>8.5:</b> Duplicate Summary .....	162
<b>8.6:</b> Surrogate Recovery Summaries .....	164
<b>8.7:</b> GC Surrogate Retention Time Summaries .....	165
<b>8.8:</b> Initial and Continuing Calibration Summaries .....	168
<b>Section 9: GC Semi-volatiles - Raw Data .....</b>	<b>190</b>
<b>9.1:</b> Samples .....	191
<b>9.2:</b> Method Blanks .....	199
<b>9.3:</b> Blank Spikes .....	201
<b>9.4:</b> Laboratory Control Samples .....	204
<b>9.5:</b> Matrix Spike/Matrix Spike Duplicates .....	207
<b>9.6:</b> Duplicates .....	213
<b>9.7:</b> Initial and Continuing Calibrations .....	217
<b>9.8:</b> Instrument Run Logs .....	281
<b>9.9:</b> Prep Logs .....	292
<b>Section 10: Metals Analysis - QC Data Summaries .....</b>	<b>293</b>
<b>10.1:</b> Inst QC MA13933: Al,Sb,Cu,Pb,Zn .....	294
<b>10.2:</b> Prep QC MP31871: Al,Sb,Cu,Pb,Zn .....	318
<b>10.3:</b> IDL and Linear Range Summaries .....	322
<b>Section 11: Metals Analysis - Raw Data .....</b>	<b>324</b>
<b>11.1:</b> Raw Data MA13933 .....	325
<b>11.2:</b> Prep Logs .....	379
<b>Section 12: General Chemistry - QC Data Summaries .....</b>	<b>380</b>
<b>12.1:</b> Duplicate Results Summary .....	381
<b>Section 13: General Chemistry - Raw Data .....</b>	<b>382</b>
<b>13.1:</b> Raw Data GN74604: pH .....	383



## Sample Summary

Cape Environmental Management Inc.

**Job No:** FA42152

OB/OD Site I, OB Site II, Fort Bliss, TX

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
FA42152-1	03/15/17	09:00	BBDC 03/17/17	SO	Soil	OBOD1-SU08-SS-01
FA42152-1A	03/15/17	09:00	BBDC 03/17/17	SO	Soil	OBOD1-SU08-SS-01
FA42152-2	03/15/17	09:00	BBDC 03/17/17	SO	Soil	OBOD1-SU08-SS-02
FA42152-2A	03/15/17	09:00	BBDC 03/17/17	SO	Soil	OBOD1-SU08-SS-02
FA42152-3	03/15/17	09:00	BBDC 03/17/17	SO	Soil	OBOD1-SU08-SS-03
FA42152-3A	03/15/17	09:00	BBDC 03/17/17	SO	Soil	OBOD1-SU08-SS-03
FA42152-4	03/16/17	08:30	BBDC 03/17/17	SO	Soil	OB2-SU01-SS-01
FA42152-5	03/16/17	08:30	BBDC 03/17/17	SO	Soil	OB2-SU01-SS-02
FA42152-6	03/16/17	08:30	BBDC 03/17/17	SO	Soil	OB2-SU01-SS-03
FA42152-7	03/16/17	10:20	BBDC 03/17/17	SO	Soil	OB2-SU02-SS-01
FA42152-8	03/16/17	13:30	BBDC 03/17/17	SO	Soil	OB2-SU03-SS-01
FA42152-8D	03/16/17	13:30	BBDC 03/17/17	SO	Soil Dup/MSD	OB2-SU03-SS-01
FA42152-8S	03/16/17	13:30	BBDC 03/17/17	SO	Soil Matrix Spike	OB2-SU03-SS-01

Soil samples reported on a dry weight basis unless otherwise indicated on result page.



**Sample Summary**  
(continued)

Cape Environmental Management Inc.

**Job No:** FA42152

OB/OD Site I, OB Site II, Fort Bliss, TX

Sample Number	Collected		Matrix			Client
	Date	Time By	Received	Code	Type	Sample ID
FA42152-9	03/16/17	14:50 BBDC	03/17/17	SO	Soil	OBOD1-SU09-SS-01
FA42152-9A	03/16/17	14:50 BBDC	03/17/17	SO	Soil	OBOD1-SU09-SS-01

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

## SAMPLE DELIVERY GROUP CASE NARRATIVE

2

**Client:** Cape Environmental Management Inc.

**Job No:** FA42152

**Site:** OB/OD Site I, OB Site II, Fort Bliss, TX

**Report Date:** 5/19/2017 9:54:53

9 Sample(s) were collected on 03/15/2017 and 03/16/2017 and were received at SGS Accutest Southeast (SASE) on 03/17/2017 properly preserved, at 4.4 Deg. C and intact. These Samples received an SASE job number of FA42152. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

FA42152-1, FA42152-2, FA42152-3, FA42152-4, FA42152-5, FA42152-6, FA42152-7, FA42152-8, FA42152-9: Samples air dried prior to analysis; percent solids reported as 100%.

### Extractables by GCMS By Method SW846 8270D BY SIM

**Matrix:** SO

**Batch ID:** OP64367

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA42152-8MS, FA42152-8MSD were used as the QC samples indicated.

Blank Spike Recovery(s) for Anthracene are outside lab control limits. % Recovery was within DOD QSM control limits.

FA42152-1 for Terphenyl-d14: Outside DoD QSM control limits.

FA42152-2 for Terphenyl-d14: Outside DoD QSM control limits.

FA42152-3 for Terphenyl-d14: Outside DoD QSM control limits.

FA42152-4 for Terphenyl-d14: Outside DoD QSM control limits.

FA42152-5 for Terphenyl-d14: Outside DoD QSM control limits.

FA42152-6 for Terphenyl-d14: Outside DoD QSM control limits.

### Extractables by GC By Method SW846 8330B

**Matrix:** SO

**Batch ID:** OP64396

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA42152-1MS, FA42152-1MSD, FA42152-3DUP were used as the QC samples indicated.

LCS Recovery(s) for 2,4,6-Trinitrotoluene, 4-amino-2,6-Dinitrotoluene, Tetryl are outside control limits.

Matrix Spike Recovery(s) for 1,3,5-Trinitrobenzene, Tetryl, 2,4,6-Trinitrotoluene are outside DOD QSM control limits. Probable cause is due to matrix interference. % RPD was within control limits for MS/MSD.

Sample(s) OP64396-PT1 shows surrogate outside control limits. The surrogate was not added.

OP64396-MS and OP64396-MSD for Tetryl: Outside DoD QSM control limits.

OP64396-MS and OP64396-MSD for 1,3,5-Trinitrobenzene: Outside DoD QSM control limits.

OP64396-MS and OP64396-MSD for 2,4,6-Trinitrotoluene: Outside DoD QSM control limits.

FA42152-1 for Tetryl: Associated LCS and MS/MSD recovery outside DOD QSM control limits.

FA42152-1 for 1,3,5-Trinitrobenzene: Associated MS/MSD recovery outside DOD QSM control limits.

FA42152-1 for 2,4,6-Trinitrotoluene: Associated LCS and MS/MSD recovery outside DOD QSM control limits.

FA42152-1 for 4-amino-2,6-Dinitrotoluene: Associated LCS recovery outside DOD QSM control limits.

FA42152-2 for 2,4,6-Trinitrotoluene: associated LCS recovery outside DOD QSM control limits.

FA42152-2 for 4-amino-2,6-Dinitrotoluene: Associated LCS recovery outside DOD QSM control limits.

FA42152-2 for Tetryl: Associated LCS recovery outside DOD QSM control limits.

Friday, May 19, 2017

Page 1 of 2

**Extractables by GC By Method SW846 8330B****Matrix:** SO**Batch ID:** OP64396

FA42152-3 for 2,4,6-Trinitrotoluene: associated LCS recovery outside DOD QSM control limits.

FA42152-3 for 4-amino-2,6-Dinitrotoluene: Associated LCS recovery outside DOD QSM control limits.

FA42152-3 for Tetryl: Associated LCS recovery outside DOD QSM control limits.

FA42152-9 for Tetryl: Associated LCS recovery outside DOD QSM control limits.

FA42152-9 for 4-amino-2,6-Dinitrotoluene: Associated LCS recovery outside DOD QSM control limits.

FA42152-9 for 2,4,6-Trinitrotoluene: associated LCS recovery outside DOD QSM control limits.

**Metals By Method SW846 6010C****Matrix:** SO**Batch ID:** MP31871

All samples were digested within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

**Wet Chemistry By Method SW846 9045D****Matrix:** SO**Batch ID:** GN74604

Sample(s) FA42152-1ADUP were used as the QC samples for pH.

SGS Accutest (SASE) certifies that this report meets the project requirements for analytical data produced for the samples as received at SASE and as stated on the COC. SASE certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the SASE Quality Manual except as noted above. This report is to be used in its entirety. SASE is not responsible for any assumptions of data quality if partial data packages are used.

(b) (6)



Date: May 19, 2017

Friday, May 19, 2017

Page 2 of 2

## Summary of Hits

**Job Number:** FA42152  
**Account:** Cape Environmental Management Inc.  
**Project:** OB/OD Site I, OB Site II, Fort Bliss, TX  
**Collected:** 03/15/17 thru 03/16/17

Lab Sample ID	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
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### FA42152-1 OBOD1-SU08-SS-01

Benzo(b)fluoranthene	4.4 J	13	6.7	ug/kg	SW846 8270D BY SIM
Aluminum	4130	8.2	2.0	mg/kg	SW846 6010C
Antimony	0.053 J	0.82	0.20	mg/kg	SW846 6010C
Copper	6.3	1.0	0.082	mg/kg	SW846 6010C
Lead	9.4	0.82	0.16	mg/kg	SW846 6010C
Zinc	15.3	0.82	0.20	mg/kg	SW846 6010C

### FA42152-1A OBOD1-SU08-SS-01

pH	8.18		a	su	SW846 9045D
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### FA42152-2 OBOD1-SU08-SS-02

Benzo(b)fluoranthene	3.5 J	13	6.6	ug/kg	SW846 8270D BY SIM
Aluminum	4060	9.3	2.3	mg/kg	SW846 6010C
Copper	5.8	1.2	0.093	mg/kg	SW846 6010C
Lead	8.9	0.93	0.19	mg/kg	SW846 6010C
Zinc	14.8	0.93	0.23	mg/kg	SW846 6010C

### FA42152-2A OBOD1-SU08-SS-02

pH	8.22		a	su	SW846 9045D
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### FA42152-3 OBOD1-SU08-SS-03

Benzo(b)fluoranthene	3.8 J	13	6.6	ug/kg	SW846 8270D BY SIM
Benzo(k)fluoranthene	3.9 J	13	6.6	ug/kg	SW846 8270D BY SIM
Aluminum	3950	7.1	1.8	mg/kg	SW846 6010C
Antimony	0.050 J	0.71	0.18	mg/kg	SW846 6010C
Copper	5.9	0.89	0.071	mg/kg	SW846 6010C
Lead	9.5	0.71	0.14	mg/kg	SW846 6010C
Zinc	14.7	0.71	0.18	mg/kg	SW846 6010C

### FA42152-3A OBOD1-SU08-SS-03

pH	8.22		a	su	SW846 9045D
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### FA42152-4 OB2-SU01-SS-01

Benzo(a)anthracene	3.5 J	13	6.6	ug/kg	SW846 8270D BY SIM
Benzo(a)pyrene	4.6 J	13	6.6	ug/kg	SW846 8270D BY SIM
Benzo(b)fluoranthene	8.0 J	13	6.6	ug/kg	SW846 8270D BY SIM
Benzo(g,h,i)perylene	4.3 J	13	6.6	ug/kg	SW846 8270D BY SIM

## Summary of Hits

**Job Number:** FA42152  
**Account:** Cape Environmental Management Inc.  
**Project:** OB/OD Site I, OB Site II, Fort Bliss, TX  
**Collected:** 03/15/17 thru 03/16/17

Lab Sample ID	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
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Chrysene		5.5 J	13	6.6	ug/kg	SW846 8270D BY SIM
Indeno(1,2,3-cd)pyrene		4.8 J	13	6.6	ug/kg	SW846 8270D BY SIM

### FA42152-5 OB2-SU01-SS-02

Benzo(a)pyrene		4.2 J	13	6.7	ug/kg	SW846 8270D BY SIM
Benzo(b)fluoranthene		7.3 J	13	6.7	ug/kg	SW846 8270D BY SIM
Benzo(g,h,i)perylene		3.6 J	13	6.7	ug/kg	SW846 8270D BY SIM
Chrysene		4.6 J	13	6.7	ug/kg	SW846 8270D BY SIM
Indeno(1,2,3-cd)pyrene		3.6 J	13	6.7	ug/kg	SW846 8270D BY SIM

### FA42152-6 OB2-SU01-SS-03

Benzo(a)pyrene		3.8 J	13	6.7	ug/kg	SW846 8270D BY SIM
Benzo(b)fluoranthene		6.6 J	13	6.7	ug/kg	SW846 8270D BY SIM
Benzo(g,h,i)perylene		3.4 J	13	6.7	ug/kg	SW846 8270D BY SIM
Chrysene		4.5 J	13	6.7	ug/kg	SW846 8270D BY SIM
Indeno(1,2,3-cd)pyrene		3.7 J	13	6.7	ug/kg	SW846 8270D BY SIM

### FA42152-7 OB2-SU02-SS-01

Benzo(a)anthracene		3.5 J	13	6.6	ug/kg	SW846 8270D BY SIM
Benzo(a)pyrene		4.5 J	13	6.6	ug/kg	SW846 8270D BY SIM
Benzo(b)fluoranthene		8.3 J	13	6.6	ug/kg	SW846 8270D BY SIM
Benzo(g,h,i)perylene		4.7 J	13	6.6	ug/kg	SW846 8270D BY SIM
Chrysene		5.4 J	13	6.6	ug/kg	SW846 8270D BY SIM
Indeno(1,2,3-cd)pyrene		5.1 J	13	6.6	ug/kg	SW846 8270D BY SIM

### FA42152-8 OB2-SU03-SS-01

Benzo(a)anthracene		3.4 J	13	6.7	ug/kg	SW846 8270D BY SIM
Benzo(a)pyrene		5.7 J	13	6.7	ug/kg	SW846 8270D BY SIM
Benzo(b)fluoranthene		10.0 J	13	6.7	ug/kg	SW846 8270D BY SIM
Benzo(g,h,i)perylene		5.2 J	13	6.7	ug/kg	SW846 8270D BY SIM
Benzo(k)fluoranthene		3.3 J	13	6.7	ug/kg	SW846 8270D BY SIM
Chrysene		6.6 J	13	6.7	ug/kg	SW846 8270D BY SIM
Indeno(1,2,3-cd)pyrene		5.7 J	13	6.7	ug/kg	SW846 8270D BY SIM

### FA42152-9 OBOD1-SU09-SS-01

Benzo(a)pyrene		4.4 J	13	6.7	ug/kg	SW846 8270D BY SIM
Benzo(b)fluoranthene		8.1 J	13	6.7	ug/kg	SW846 8270D BY SIM
Benzo(g,h,i)perylene		8.5 J	13	6.7	ug/kg	SW846 8270D BY SIM
Chrysene		4.5 J	13	6.7	ug/kg	SW846 8270D BY SIM
Indeno(1,2,3-cd)pyrene		4.6 J	13	6.7	ug/kg	SW846 8270D BY SIM

## Summary of Hits

Page 3 of 3

**Job Number:** FA42152  
**Account:** Cape Environmental Management Inc.  
**Project:** OB/OD Site I, OB Site II, Fort Bliss, TX  
**Collected:** 03/15/17 thru 03/16/17

Lab Sample ID	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
Aluminum		4330	8.8	2.2	mg/kg	SW846 6010C
Antimony		0.071 J	0.88	0.22	mg/kg	SW846 6010C
Copper		7.5	1.1	0.088	mg/kg	SW846 6010C
Lead		12.7	0.88	0.18	mg/kg	SW846 6010C
Zinc		16.9	0.88	0.22	mg/kg	SW846 6010C

**FA42152-9A**    **OBOD1-SU09-SS-01**

pH	8.29	a	su	SW846 9045D
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(a) Value reported is laboratory DL (MDL).

Sample Results

Report of Analysis



SGS Accutest

## Report of Analysis

Page 1 of 1

Client Sample ID: OBOD1-SU08-SS-01

Lab Sample ID: FA42152-1

Date Sampled: 03/15/17

Matrix: SO - Soil

Date Received: 03/17/17

Method: SW846 8270D BY SIM SW846 3546

Percent Solids: n/a <sup>a</sup>

Project: OB/OD Site I, OB Site II, Fort Bliss, TX

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W098391.D	1	03/29/17	FS	03/28/17	OP64367	SW4369
Run #2							

	Initial Weight	Final Volume
Run #1	15.0 g	1.0 ml
Run #2		

## BN PAH List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
83-32-9	Acenaphthene	33 U	67	33	27	ug/kg	
208-96-8	Acenaphthylene	33 U	67	33	27	ug/kg	
120-12-7	Anthracene	33 U	67	33	17	ug/kg	
56-55-3	Benzo(a)anthracene	6.7 U	13	6.7	3.3	ug/kg	
50-32-8	Benzo(a)pyrene	6.7 U	13	6.7	3.3	ug/kg	
205-99-2	Benzo(b)fluoranthene	4.4	13	6.7	3.3	ug/kg	J
191-24-2	Benzo(g,h,i)perylene	6.7 U	13	6.7	3.3	ug/kg	
207-08-9	Benzo(k)fluoranthene	6.7 U	13	6.7	3.3	ug/kg	
218-01-9	Chrysene	6.7 U	13	6.7	3.3	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	6.7 U	13	6.7	3.3	ug/kg	
206-44-0	Fluoranthene	33 U	67	33	17	ug/kg	
86-73-7	Fluorene	33 U	67	33	27	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	6.7 U	13	6.7	3.3	ug/kg	
90-12-0	1-Methylnaphthalene	33 U	67	33	27	ug/kg	
91-57-6	2-Methylnaphthalene	33 U	67	33	27	ug/kg	
91-20-3	Naphthalene	33 U	67	33	27	ug/kg	
85-01-8	Phenanthrene	33 U	67	33	17	ug/kg	
129-00-0	Pyrene	33 U	67	33	17	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	55%		40-105%
321-60-8	2-Fluorobiphenyl	58%		43-107%
1718-51-0	Terphenyl-d14	53% <sup>b</sup>		45-119%

(a) Sample air dried prior to analysis; percent solids reported as 100%.

(b) Outside DoD QSM control limits.

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

SGS Accutest

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	OBOD1-SU08-SS-01	<b>Date Sampled:</b>	03/15/17
<b>Lab Sample ID:</b>	FA42152-1	<b>Date Received:</b>	03/17/17
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8330B SW846 8330B		
<b>Project:</b>	OB/OD Site I, OB Site II, Fort Bliss, TX		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB053979.D	1	03/31/17	EM	03/29/17	OP64396	GBB1567
Run #2							

	Initial Weight	Final Volume
Run #1	10.1 g	50.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	74 U	99	74	50	ug/kg	
121-82-4	RDX	74 U	99	74	50	ug/kg	
99-65-0	1,3-Dinitrobenzene	74 U	99	74	50	ug/kg	
606-20-2	2,6-Dinitrotoluene	74 U	99	74	50	ug/kg	
121-14-2	2,4-Dinitrotoluene	74 U	99	74	50	ug/kg	
35572-78-2	2-amino-4,6-Dinitrotoluene	74 U	99	74	50	ug/kg	
19406-51-0	4-amino-2,6-Dinitrotoluene <sup>b</sup>	74 U	99	74	50	ug/kg	
98-95-3	Nitrobenzene	74 U	99	74	50	ug/kg	
88-72-2	o-Nitrotoluene	74 U	99	74	50	ug/kg	
99-08-1	m-Nitrotoluene	74 U	99	74	50	ug/kg	
99-99-0	p-Nitrotoluene	74 U	99	74	50	ug/kg	
479-45-8	Tetryl <sup>c</sup>	74 UJ	99	74	50	ug/kg	J
99-35-4	1,3,5-Trinitrobenzene <sup>d</sup>	74 UJ	99	74	50	ug/kg	J
118-96-7	2,4,6-Trinitrotoluene <sup>c</sup>	74 UJ	99	74	50	ug/kg	J
55-63-0	Nitroglycerine	500 U	990	500	250	ug/kg	
78-11-5	PETN	500 U	990	500	250	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	81%		69-134%

(a) Sample air dried prior to analysis; percent solids reported as 100%.

(b) Associated LCS recovery outside DOD QSM control limits.

(c) Associated LCS and MS/MSD recovery outside DOD QSM control limits.

(d) Associated MS/MSD recovery outside DOD QSM control limits.

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

## Report of Analysis

Page 1 of 1

Client Sample ID: OBOD1-SU08-SS-01

Lab Sample ID: FA42152-1

Date Sampled: 03/15/17

Matrix: SQ - Soil

Date Received: 03/17/17

Percent Solids: n/a <sup>a</sup>

Project: OB/OD Site I, OB Site II, Fort Bliss, TX

## Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	4130	8.2	2.0	1.4	mg/kg	1	03/28/17	03/28/17 LM	SW846 6010C	<sup>1</sup> SW846 3050B <sup>2</sup>
Antimony	0.053 J	0.82	0.20	0.053	mg/kg	1	03/28/17	03/28/17 LM	SW846 6010C	<sup>1</sup> SW846 3050B <sup>2</sup>
Copper	6.3	1.0	0.082	0.041	mg/kg	1	03/28/17	03/28/17 LM	SW846 6010C	<sup>1</sup> SW846 3050B <sup>2</sup>
Lead	9.4	0.82	0.16	0.041	mg/kg	1	03/28/17	03/28/17 LM	SW846 6010C	<sup>1</sup> SW846 3050B <sup>2</sup>
Zinc	15.3	0.82	0.20	0.12	mg/kg	1	03/28/17	03/28/17 LM	SW846 6010C	<sup>1</sup> SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA13933

(2) Prep QC Batch: MP31871

(a) Sample air dried prior to analysis; percent solids reported as 100%.

LOQ = Limit of Quantitation

DL = Detection Limit

U = Indicates a result &lt; LOD

LOD = Limit of Detection

B = Analyte found in associated blank

J = Indicates a result &gt; = DL (MDL) but &lt; LOQ

Report of Analysis

Client Sample ID:	OBOD1-SU08-SS-01	Date Sampled:	03/15/17
Lab Sample ID:	FA42152-1A	Date Received:	03/17/17
Matrix:	SO - Soil	Percent Solids:	n/a
Project:	OB/OD Site I, OB Site II, Fort Bliss, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
pH	8.18		su	1	03/31/17 16:45	VK	SW846 9045D

RL = Reporting Limit

4.2  
4

SGS Accutest

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	OBOD 1-SU08-SS-02				
<b>Lab Sample ID:</b>	FA42152-2			<b>Date Sampled:</b>	03/15/17
<b>Matrix:</b>	SO - Soil			<b>Date Received:</b>	03/17/17
<b>Method:</b>	SW846 8270D BY SIM SW846 3546			<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Project:</b>	OB/OD Site I, OB Site II, Fort Bliss, TX				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W098392.D	1	03/29/17	FS	03/28/17	OP64367	SW4369
Run #2							

	Initial Weight	Final Volume
Run #1	15.2 g	1.0 ml
Run #2		

## BN PAH List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
83-32-9	Acenaphthene	33 U	66	33	26	ug/kg	
208-96-8	Acenaphthylene	33 U	66	33	26	ug/kg	
120-12-7	Anthracene	33 U	66	33	16	ug/kg	
56-55-3	Benzo(a)anthracene	6.6 U	13	6.6	3.3	ug/kg	
50-32-8	Benzo(a)pyrene	6.6 U	13	6.6	3.3	ug/kg	
205-99-2	Benzo(b)fluoranthene	3.5	13	6.6	3.3	ug/kg	J
191-24-2	Benzo(g,h,i)perylene	6.6 U	13	6.6	3.3	ug/kg	
207-08-9	Benzo(k)fluoranthene	6.6 U	13	6.6	3.3	ug/kg	
218-01-9	Chrysene	6.6 U	13	6.6	3.3	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	6.6 U	13	6.6	3.3	ug/kg	
206-44-0	Fluoranthene	33 U	66	33	16	ug/kg	
86-73-7	Fluorene	33 U	66	33	26	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	6.6 U	13	6.6	3.3	ug/kg	
90-12-0	1-Methylnaphthalene	33 U	66	33	26	ug/kg	
91-57-6	2-Methylnaphthalene	33 U	66	33	26	ug/kg	
91-20-3	Naphthalene	33 U	66	33	26	ug/kg	
85-01-8	Phenanthrene	33 U	66	33	16	ug/kg	
129-00-0	Pyrene	33 U	66	33	16	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	58%		40-105%
321-60-8	2-Fluorobiphenyl	68%		43-107%
1718-51-0	Terphenyl-d14	55% <sup>b</sup>		45-119%

(a) Sample air dried prior to analysis; percent solids reported as 100%.

(b) Outside DoD QSM control limits.

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

SGS Accutest

## Report of Analysis

Page 1 of 1

Client Sample ID: OBOD1-SU08-SS-02

Lab Sample ID: FA42152-2

Date Sampled: 03/15/17

Matrix: SO - Soil

Date Received: 03/17/17

Method: SW846 8330B SW846 8330B

Percent Solids: n/a <sup>a</sup>

Project: OB/OD Site I, OB Site II, Fort Bliss, TX

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB053982.D	1	03/31/17	EM	03/29/17	OP64396	GBB1567
Run #2							

	Initial Weight	Final Volume
Run #1	10.0 g	50.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	75 U	100	75	51	ug/kg	
121-82-4	RDX	75 U	100	75	50	ug/kg	
99-65-0	1,3-Dinitrobenzene	75 U	100	75	50	ug/kg	
606-20-2	2,6-Dinitrotoluene	75 U	100	75	50	ug/kg	
121-14-2	2,4-Dinitrotoluene	75 U	100	75	50	ug/kg	
35572-78-2	2-amino-4,6-Dinitrotoluene	75 U	100	75	50	ug/kg	
19406-51-0	4-amino-2,6-Dinitrotoluene <sup>b</sup>	75 U	100	75	51	ug/kg	
98-95-3	Nitrobenzene	75 U	100	75	50	ug/kg	
88-72-2	o-Nitrotoluene	75 U	100	75	50	ug/kg	
99-08-1	m-Nitrotoluene	75 U	100	75	50	ug/kg	
99-99-0	p-Nitrotoluene	75 U	100	75	50	ug/kg	
479-45-8	Tetryl <sup>b</sup>	75 U	100	75	50	ug/kg	
99-35-4	1,3,5-Trinitrobenzene	75 U	100	75	50	ug/kg	
118-96-7	2,4,6-Trinitrotoluene <sup>b</sup>	75 U	100	75	50	ug/kg	
55-63-0	Nitroglycerine	500 U	1000	500	250	ug/kg	
78-11-5	PETN	500 U	1000	500	250	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	81%		69-134%

(a) Sample air dried prior to analysis; percent solids reported as 100%.

(b) Associated LCS recovery outside DOD QSM control limits.

U = Not detected LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound



## Report of Analysis

Page 1 of 1

Client Sample ID: OBOD1-SU08-SS-02

Lab Sample ID: FA42152-2

Date Sampled: 03/15/17

Matrix: SQ - Soil

Date Received: 03/17/17

Percent Solids: n/a <sup>a</sup>

Project: OB/OD Site I, OB Site II, Fort Bliss, TX

## Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	4060	9.3	2.3	1.6	mg/kg	1	03/28/17	03/28/17 LM	SW846 6010C	<sup>1</sup> SW846 3050B <sup>2</sup>
Antimony	0.23 U	0.93	0.23	0.060	mg/kg	1	03/28/17	03/28/17 LM	SW846 6010C	<sup>1</sup> SW846 3050B <sup>2</sup>
Copper	5.8	1.2	0.093	0.046	mg/kg	1	03/28/17	03/28/17 LM	SW846 6010C	<sup>1</sup> SW846 3050B <sup>2</sup>
Lead	8.9	0.93	0.19	0.046	mg/kg	1	03/28/17	03/28/17 LM	SW846 6010C	<sup>1</sup> SW846 3050B <sup>2</sup>
Zinc	14.8	0.93	0.23	0.14	mg/kg	1	03/28/17	03/28/17 LM	SW846 6010C	<sup>1</sup> SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA13933

(2) Prep QC Batch: MP31871

(a) Sample air dried prior to analysis; percent solids reported as 100%.

LOQ = Limit of Quantitation

DL = Detection Limit

U = Indicates a result &lt; LOD

LOD = Limit of Detection

B = Analyte found in associated blank

J = Indicates a result &gt; = DL (MDL) but &lt; LOQ

Report of Analysis

Client Sample ID:	OBOD 1-SU08-SS-02			
Lab Sample ID:	FA42152-2A		Date Sampled:	03/15/17
Matrix:	SO - Soil		Date Received:	03/17/17
			Percent Solids:	n/a
Project:	OB/OD Site I, OB Site II, Fort Bliss, TX			

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
pH	8.22		su	1	03/31/17 16:45	VK	SW846 9045D

RL = Reporting Limit

4.4  
4



SGS Accutest

## Report of Analysis

Page 1 of 1

Client Sample ID: OBOD1-SU08-SS-03

Lab Sample ID: FA42152-3

Date Sampled: 03/15/17

Matrix: SO - Soil

Date Received: 03/17/17

Method: SW846 8270D BY SIM SW846 3546

Percent Solids: n/a <sup>a</sup>

Project: OB/OD Site I, OB Site II, Fort Bliss, TX

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W098393.D	1	03/29/17	FS	03/28/17	OP64367	SW4369
Run #2							

	Initial Weight	Final Volume
Run #1	15.1 g	1.0 ml
Run #2		

## BN PAH List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
83-32-9	Acenaphthene	33 U	66	33	26	ug/kg	
208-96-8	Acenaphthylene	33 U	66	33	26	ug/kg	
120-12-7	Anthracene	33 U	66	33	17	ug/kg	
56-55-3	Benzo(a)anthracene	6.6 U	13	6.6	3.3	ug/kg	
50-32-8	Benzo(a)pyrene	6.6 U	13	6.6	3.3	ug/kg	
205-99-2	Benzo(b)fluoranthene	3.8	13	6.6	3.3	ug/kg	J
191-24-2	Benzo(g,h,i)perylene	6.6 U	13	6.6	3.3	ug/kg	
207-08-9	Benzo(k)fluoranthene	3.9	13	6.6	3.3	ug/kg	J
218-01-9	Chrysene	6.6 U	13	6.6	3.3	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	6.6 U	13	6.6	3.3	ug/kg	
206-44-0	Fluoranthene	33 U	66	33	17	ug/kg	
86-73-7	Fluorene	33 U	66	33	26	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	6.6 U	13	6.6	3.3	ug/kg	
90-12-0	1-Methylnaphthalene	33 U	66	33	26	ug/kg	
91-57-6	2-Methylnaphthalene	33 U	66	33	26	ug/kg	
91-20-3	Naphthalene	33 U	66	33	26	ug/kg	
85-01-8	Phenanthrene	33 U	66	33	17	ug/kg	
129-00-0	Pyrene	33 U	66	33	17	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	53%		40-105%
321-60-8	2-Fluorobiphenyl	65%		43-107%
1718-51-0	Terphenyl-d14	54% <sup>b</sup>		45-119%

(a) Sample air dried prior to analysis; percent solids reported as 100%.

(b) Outside DoD QSM control limits.

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

SGS Accutest

## Report of Analysis

Page 1 of 1

Client Sample ID: OBOD1-SU08-SS-03

Lab Sample ID: FA42152-3

Date Sampled: 03/15/17

Matrix: SO - Soil

Date Received: 03/17/17

Method: SW846 8330B SW846 8330B

Percent Solids: n/a <sup>a</sup>

Project: OB/OD Site I, OB Site II, Fort Bliss, TX

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB053983.D	1	03/31/17	EM	03/29/17	OP64396	GBB1567
Run #2							

	Initial Weight	Final Volume
Run #1	10.0 g	50.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	75 U	100	75	51	ug/kg	
121-82-4	RDX	75 U	100	75	50	ug/kg	
99-65-0	1,3-Dinitrobenzene	75 U	100	75	50	ug/kg	
606-20-2	2,6-Dinitrotoluene	75 U	100	75	50	ug/kg	
121-14-2	2,4-Dinitrotoluene	75 U	100	75	50	ug/kg	
35572-78-2	2-amino-4,6-Dinitrotoluene	75 U	100	75	50	ug/kg	
19406-51-0	4-amino-2,6-Dinitrotoluene <sup>b</sup>	75 U	100	75	51	ug/kg	
98-95-3	Nitrobenzene	75 U	100	75	50	ug/kg	
88-72-2	o-Nitrotoluene	75 U	100	75	50	ug/kg	
99-08-1	m-Nitrotoluene	75 U	100	75	50	ug/kg	
99-99-0	p-Nitrotoluene	75 U	100	75	50	ug/kg	
479-45-8	Tetryl <sup>b</sup>	75 U	100	75	50	ug/kg	
99-35-4	1,3,5-Trinitrobenzene	75 U	100	75	50	ug/kg	
118-96-7	2,4,6-Trinitrotoluene <sup>b</sup>	75 U	100	75	50	ug/kg	
55-63-0	Nitroglycerine	500 U	1000	500	250	ug/kg	
78-11-5	PETN	500 U	1000	500	250	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	84%		69-134%

(a) Sample air dried prior to analysis; percent solids reported as 100%.

(b) Associated LCS recovery outside DOD QSM control limits.

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

## Report of Analysis

Page 1 of 1

Client Sample ID: OBOD1-SU08-SS-03

Lab Sample ID: FA42152-3

Date Sampled: 03/15/17

Matrix: SQ - Soil

Date Received: 03/17/17

Percent Solids: n/a <sup>a</sup>

Project: OB/OD Site I, OB Site II, Fort Bliss, TX

## Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	3950	7.1	1.8	1.3	mg/kg	1	03/28/17	03/28/17 LM	SW846 6010C	<sup>1</sup> SW846 3050B <sup>2</sup>
Antimony	0.050 J	0.71	0.18	0.046	mg/kg	1	03/28/17	03/28/17 LM	SW846 6010C	<sup>1</sup> SW846 3050B <sup>2</sup>
Copper	5.9	0.89	0.071	0.036	mg/kg	1	03/28/17	03/28/17 LM	SW846 6010C	<sup>1</sup> SW846 3050B <sup>2</sup>
Lead	9.5	0.71	0.14	0.036	mg/kg	1	03/28/17	03/28/17 LM	SW846 6010C	<sup>1</sup> SW846 3050B <sup>2</sup>
Zinc	14.7	0.71	0.18	0.11	mg/kg	1	03/28/17	03/28/17 LM	SW846 6010C	<sup>1</sup> SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA13933

(2) Prep QC Batch: MP31871

(a) Sample air dried prior to analysis; percent solids reported as 100%.

LOQ = Limit of Quantitation

DL = Detection Limit

U = Indicates a result &lt; LOD

LOD = Limit of Detection

B = Analyte found in associated blank

J = Indicates a result &gt; = DL (MDL) but &lt; LOQ

Report of Analysis

Client Sample ID:	OBOD 1-SU08-SS-03			
Lab Sample ID:	FA42152-3A		Date Sampled:	03/15/17
Matrix:	SO - Soil		Date Received:	03/17/17
			Percent Solids:	n/a
Project:	OB/OD Site I, OB Site II, Fort Bliss, TX			

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
pH	8.22		su	1	03/31/17 16:45	VK	SW846 9045D

RL = Reporting Limit

SGS Accutest

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	OB2-SU01-SS-01	<b>Date Sampled:</b>	03/16/17
<b>Lab Sample ID:</b>	FA42152-4	<b>Date Received:</b>	03/17/17
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8270D BY SIM SW846 3546		
<b>Project:</b>	OB/OD Site I, OB Site II, Fort Bliss, TX		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W098394.D	1	03/29/17	FS	03/28/17	OP64367	SW4369
Run #2							

	Initial Weight	Final Volume
Run #1	15.1 g	1.0 ml
Run #2		

## BN PAH List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
83-32-9	Acenaphthene	33 U	66	33	26	ug/kg	
208-96-8	Acenaphthylene	33 U	66	33	26	ug/kg	
120-12-7	Anthracene	33 U	66	33	17	ug/kg	
56-55-3	Benzo(a)anthracene	3.5	13	6.6	3.3	ug/kg	J
50-32-8	Benzo(a)pyrene	4.6	13	6.6	3.3	ug/kg	J
205-99-2	Benzo(b)fluoranthene	8.0	13	6.6	3.3	ug/kg	J
191-24-2	Benzo(g,h,i)perylene	4.3	13	6.6	3.3	ug/kg	J
207-08-9	Benzo(k)fluoranthene	6.6 U	13	6.6	3.3	ug/kg	
218-01-9	Chrysene	5.5	13	6.6	3.3	ug/kg	J
53-70-3	Dibenzo(a,h)anthracene	6.6 U	13	6.6	3.3	ug/kg	
206-44-0	Fluoranthene	33 U	66	33	17	ug/kg	
86-73-7	Fluorene	33 U	66	33	26	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	4.8	13	6.6	3.3	ug/kg	J
90-12-0	1-Methylnaphthalene	33 U	66	33	26	ug/kg	
91-57-6	2-Methylnaphthalene	33 U	66	33	26	ug/kg	
91-20-3	Naphthalene	33 U	66	33	26	ug/kg	
85-01-8	Phenanthrene	33 U	66	33	17	ug/kg	
129-00-0	Pyrene	33 U	66	33	17	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	54%		40-105%
321-60-8	2-Fluorobiphenyl	61%		43-107%
1718-51-0	Terphenyl-d14	54% <sup>b</sup>		45-119%

(a) Sample air dried prior to analysis; percent solids reported as 100%.

(b) Outside DoD QSM control limits.

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

SGS Accutest

## Report of Analysis

Page 1 of 1

Client Sample ID: OB2-SU01-SS-02

Lab Sample ID: FA42152-5

Date Sampled: 03/16/17

Matrix: SO - Soil

Date Received: 03/17/17

Method: SW846 8270D BY SIM SW846 3546

Percent Solids: n/a <sup>a</sup>

Project: OB/OD Site I, OB Site II, Fort Bliss, TX

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W098395.D	1	03/29/17	FS	03/28/17	OP64367	SW4369
Run #2							

	Initial Weight	Final Volume
Run #1	15.0 g	1.0 ml
Run #2		

## BN PAH List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
83-32-9	Acenaphthene	33 U	67	33	27	ug/kg	
208-96-8	Acenaphthylene	33 U	67	33	27	ug/kg	
120-12-7	Anthracene	33 U	67	33	17	ug/kg	
56-55-3	Benzo(a)anthracene	6.7 U	13	6.7	3.3	ug/kg	
50-32-8	Benzo(a)pyrene	4.2	13	6.7	3.3	ug/kg	J
205-99-2	Benzo(b)fluoranthene	7.3	13	6.7	3.3	ug/kg	J
191-24-2	Benzo(g,h,i)perylene	3.6	13	6.7	3.3	ug/kg	J
207-08-9	Benzo(k)fluoranthene	6.7 U	13	6.7	3.3	ug/kg	
218-01-9	Chrysene	4.6	13	6.7	3.3	ug/kg	J
53-70-3	Dibenzo(a,h)anthracene	6.7 U	13	6.7	3.3	ug/kg	
206-44-0	Fluoranthene	33 U	67	33	17	ug/kg	
86-73-7	Fluorene	33 U	67	33	27	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	3.6	13	6.7	3.3	ug/kg	J
90-12-0	1-Methylnaphthalene	33 U	67	33	27	ug/kg	
91-57-6	2-Methylnaphthalene	33 U	67	33	27	ug/kg	
91-20-3	Naphthalene	33 U	67	33	27	ug/kg	
85-01-8	Phenanthrene	33 U	67	33	17	ug/kg	
129-00-0	Pyrene	33 U	67	33	17	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	57%		40-105%
321-60-8	2-Fluorobiphenyl	65%		43-107%
1718-51-0	Terphenyl-d14	53% <sup>b</sup>		45-119%

(a) Sample air dried prior to analysis; percent solids reported as 100%.

(b) Outside DoD QSM control limits.

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound



SGS Accutest

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	OB2-SU01-SS-03	<b>Date Sampled:</b>	03/16/17
<b>Lab Sample ID:</b>	FA42152-6	<b>Date Received:</b>	03/17/17
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8270D BY SIM SW846 3546		
<b>Project:</b>	OB/OD Site I, OB Site II, Fort Bliss, TX		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W098396.D	1	03/29/17	FS	03/28/17	OP64367	SW4369
Run #2							

	Initial Weight	Final Volume
Run #1	15.0 g	1.0 ml
Run #2		

## BN PAH List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
83-32-9	Acenaphthene	33 U	67	33	27	ug/kg	
208-96-8	Acenaphthylene	33 U	67	33	27	ug/kg	
120-12-7	Anthracene	33 U	67	33	17	ug/kg	
56-55-3	Benzo(a)anthracene	6.7 U	13	6.7	3.3	ug/kg	
50-32-8	Benzo(a)pyrene	3.8	13	6.7	3.3	ug/kg	J
205-99-2	Benzo(b)fluoranthene	6.6	13	6.7	3.3	ug/kg	J
191-24-2	Benzo(g,h,i)perylene	3.4	13	6.7	3.3	ug/kg	J
207-08-9	Benzo(k)fluoranthene	6.7 U	13	6.7	3.3	ug/kg	
218-01-9	Chrysene	4.5	13	6.7	3.3	ug/kg	J
53-70-3	Dibenzo(a,h)anthracene	6.7 U	13	6.7	3.3	ug/kg	
206-44-0	Fluoranthene	33 U	67	33	17	ug/kg	
86-73-7	Fluorene	33 U	67	33	27	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	3.7	13	6.7	3.3	ug/kg	J
90-12-0	1-Methylnaphthalene	33 U	67	33	27	ug/kg	
91-57-6	2-Methylnaphthalene	33 U	67	33	27	ug/kg	
91-20-3	Naphthalene	33 U	67	33	27	ug/kg	
85-01-8	Phenanthrene	33 U	67	33	17	ug/kg	
129-00-0	Pyrene	33 U	67	33	17	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	63%		40-105%
321-60-8	2-Fluorobiphenyl	74%		43-107%
1718-51-0	Terphenyl-d14	57% <sup>b</sup>		45-119%

(a) Sample air dried prior to analysis; percent solids reported as 100%.

(b) Outside DoD QSM control limits.

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

SGS Accutest

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	OB2-SU02-SS-01	<b>Date Sampled:</b>	03/16/17
<b>Lab Sample ID:</b>	FA42152-7	<b>Date Received:</b>	03/17/17
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8270D BY SIM SW846 3546		
<b>Project:</b>	OB/OD Site I, OB Site II, Fort Bliss, TX		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W098397.D	1	03/29/17	FS	03/28/17	OP64367	SW4369
Run #2							

	Initial Weight	Final Volume
Run #1	15.2 g	1.0 ml
Run #2		

## BN PAH List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
83-32-9	Acenaphthene	33 U	66	33	26	ug/kg	
208-96-8	Acenaphthylene	33 U	66	33	26	ug/kg	
120-12-7	Anthracene	33 U	66	33	16	ug/kg	
56-55-3	Benzo(a)anthracene	3.5	13	6.6	3.3	ug/kg	J
50-32-8	Benzo(a)pyrene	4.5	13	6.6	3.3	ug/kg	J
205-99-2	Benzo(b)fluoranthene	8.3	13	6.6	3.3	ug/kg	J
191-24-2	Benzo(g,h,i)perylene	4.7	13	6.6	3.3	ug/kg	J
207-08-9	Benzo(k)fluoranthene	6.6 U	13	6.6	3.3	ug/kg	
218-01-9	Chrysene	5.4	13	6.6	3.3	ug/kg	J
53-70-3	Dibenzo(a,h)anthracene	6.6 U	13	6.6	3.3	ug/kg	
206-44-0	Fluoranthene	33 U	66	33	16	ug/kg	
86-73-7	Fluorene	33 U	66	33	26	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	5.1	13	6.6	3.3	ug/kg	J
90-12-0	1-Methylnaphthalene	33 U	66	33	26	ug/kg	
91-57-6	2-Methylnaphthalene	33 U	66	33	26	ug/kg	
91-20-3	Naphthalene	33 U	66	33	26	ug/kg	
85-01-8	Phenanthrene	33 U	66	33	16	ug/kg	
129-00-0	Pyrene	33 U	66	33	16	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	59%		40-105%
321-60-8	2-Fluorobiphenyl	71%		43-107%
1718-51-0	Terphenyl-d14	63%		45-119%

(a) Sample air dried prior to analysis; percent solids reported as 100%.

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound



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## Report of Analysis

Page 1 of 1

Client Sample ID: OB2-SU03-SS-01

Lab Sample ID: FA42152-8

Date Sampled: 03/16/17

Matrix: SO - Soil

Date Received: 03/17/17

Method: SW846 8270D BY SIM SW846 3546

Percent Solids: n/a <sup>a</sup>

Project: OB/OD Site I, OB Site II, Fort Bliss, TX

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W098398.D	1	03/29/17	FS	03/28/17	OP64367	SW4369
Run #2							

	Initial Weight	Final Volume
Run #1	15.0 g	1.0 ml
Run #2		

## BN PAH List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
83-32-9	Acenaphthene	33 U	67	33	27	ug/kg	
208-96-8	Acenaphthylene	33 U	67	33	27	ug/kg	
120-12-7	Anthracene	33 U	67	33	17	ug/kg	
56-55-3	Benzo(a)anthracene	3.4	13	6.7	3.3	ug/kg	J
50-32-8	Benzo(a)pyrene	5.7	13	6.7	3.3	ug/kg	J
205-99-2	Benzo(b)fluoranthene	10.0	13	6.7	3.3	ug/kg	J
191-24-2	Benzo(g,h,i)perylene	5.2	13	6.7	3.3	ug/kg	J
207-08-9	Benzo(k)fluoranthene	3.3	13	6.7	3.3	ug/kg	J
218-01-9	Chrysene	6.6	13	6.7	3.3	ug/kg	J
53-70-3	Dibenzo(a,h)anthracene	6.7 U	13	6.7	3.3	ug/kg	
206-44-0	Fluoranthene	33 U	67	33	17	ug/kg	
86-73-7	Fluorene	33 U	67	33	27	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	5.7	13	6.7	3.3	ug/kg	J
90-12-0	1-Methylnaphthalene	33 U	67	33	27	ug/kg	
91-57-6	2-Methylnaphthalene	33 U	67	33	27	ug/kg	
91-20-3	Naphthalene	33 U	67	33	27	ug/kg	
85-01-8	Phenanthrene	33 U	67	33	17	ug/kg	
129-00-0	Pyrene	33 U	67	33	17	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	62%		40-105%
321-60-8	2-Fluorobiphenyl	69%		43-107%
1718-51-0	Terphenyl-d14	61%		45-119%

(a) Sample air dried prior to analysis; percent solids reported as 100%.

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

SGS Accutest

## Report of Analysis

Page 1 of 1

Client Sample ID: OBOD1-SU09-SS-01

Lab Sample ID: FA42152-9

Date Sampled: 03/16/17

Matrix: SO - Soil

Date Received: 03/17/17

Method: SW846 8270D BY SIM SW846 3546

Percent Solids: n/a <sup>a</sup>

Project: OB/OD Site I, OB Site II, Fort Bliss, TX

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W098401.D	1	03/29/17	FS	03/28/17	OP64367	SW4369
Run #2							

	Initial Weight	Final Volume
Run #1	15.0 g	1.0 ml
Run #2		

## BN PAH List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
83-32-9	Acenaphthene	33 U	67	33	27	ug/kg	
208-96-8	Acenaphthylene	33 U	67	33	27	ug/kg	
120-12-7	Anthracene	33 U	67	33	17	ug/kg	
56-55-3	Benzo(a)anthracene	6.7 U	13	6.7	3.3	ug/kg	
50-32-8	Benzo(a)pyrene	4.4	13	6.7	3.3	ug/kg	J
205-99-2	Benzo(b)fluoranthene	8.1	13	6.7	3.3	ug/kg	J
191-24-2	Benzo(g,h,i)perylene	8.5	13	6.7	3.3	ug/kg	J
207-08-9	Benzo(k)fluoranthene	6.7 U	13	6.7	3.3	ug/kg	
218-01-9	Chrysene	4.5	13	6.7	3.3	ug/kg	J
53-70-3	Dibenzo(a,h)anthracene	6.7 U	13	6.7	3.3	ug/kg	
206-44-0	Fluoranthene	33 U	67	33	17	ug/kg	
86-73-7	Fluorene	33 U	67	33	27	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	4.6	13	6.7	3.3	ug/kg	J
90-12-0	1-Methylnaphthalene	33 U	67	33	27	ug/kg	
91-57-6	2-Methylnaphthalene	33 U	67	33	27	ug/kg	
91-20-3	Naphthalene	33 U	67	33	27	ug/kg	
85-01-8	Phenanthrene	33 U	67	33	17	ug/kg	
129-00-0	Pyrene	33 U	67	33	17	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	62%		40-105%
321-60-8	2-Fluorobiphenyl	70%		43-107%
1718-51-0	Terphenyl-d14	61%		45-119%

(a) Sample air dried prior to analysis; percent solids reported as 100%.

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

SGS Accutest

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	OBOD1-SU09-SS-01	<b>Date Sampled:</b>	03/16/17
<b>Lab Sample ID:</b>	FA42152-9	<b>Date Received:</b>	03/17/17
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8330B SW846 8330B		
<b>Project:</b>	OB/OD Site I, OB Site II, Fort Bliss, TX		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB053986.D	1	03/31/17	EM	03/29/17	OP64396	GBB1567
Run #2							

	Initial Weight	Final Volume
Run #1	10.1 g	50.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
2691-41-0	HMX	74 U	99	74	50	ug/kg	
121-82-4	RDX	74 U	99	74	50	ug/kg	
99-65-0	1,3-Dinitrobenzene	74 U	99	74	50	ug/kg	
606-20-2	2,6-Dinitrotoluene	74 U	99	74	50	ug/kg	
121-14-2	2,4-Dinitrotoluene	74 U	99	74	50	ug/kg	
35572-78-2	2-amino-4,6-Dinitrotoluene	74 U	99	74	50	ug/kg	
19406-51-0	4-amino-2,6-Dinitrotoluene <sup>b</sup>	74 U	99	74	50	ug/kg	
98-95-3	Nitrobenzene	74 U	99	74	50	ug/kg	
88-72-2	o-Nitrotoluene	74 U	99	74	50	ug/kg	
99-08-1	m-Nitrotoluene	74 U	99	74	50	ug/kg	
99-99-0	p-Nitrotoluene	74 U	99	74	50	ug/kg	
479-45-8	Tetryl <sup>b</sup>	74 U	99	74	50	ug/kg	
99-35-4	1,3,5-Trinitrobenzene	74 U	99	74	50	ug/kg	
118-96-7	2,4,6-Trinitrotoluene <sup>b</sup>	74 U	99	74	50	ug/kg	
55-63-0	Nitroglycerine	500 U	990	500	250	ug/kg	
78-11-5	PETN	500 U	990	500	250	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	84%		69-134%

(a) Sample air dried prior to analysis; percent solids reported as 100%.

(b) Associated LCS recovery outside DOD QSM control limits.

U = Not detected      LOD = Limit of Detection      J = Indicates an estimated value  
 LOQ = Limit of Quantitation      DL = Detection Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

## Report of Analysis

Page 1 of 1

Client Sample ID: OBOD1-SU09-SS-01

Lab Sample ID: FA42152-9

Date Sampled: 03/16/17

Matrix: SQ - Soil

Date Received: 03/17/17

Percent Solids: n/a <sup>a</sup>

Project: OB/OD Site I, OB Site II, Fort Bliss, TX

## Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	4330	8.8	2.2	1.5	mg/kg	1	03/28/17	03/28/17 LM	SW846 6010C	<sup>1</sup> SW846 3050B <sup>2</sup>
Antimony	0.071 J	0.88	0.22	0.058	mg/kg	1	03/28/17	03/28/17 LM	SW846 6010C	<sup>1</sup> SW846 3050B <sup>2</sup>
Copper	7.5	1.1	0.088	0.044	mg/kg	1	03/28/17	03/28/17 LM	SW846 6010C	<sup>1</sup> SW846 3050B <sup>2</sup>
Lead	12.7	0.88	0.18	0.044	mg/kg	1	03/28/17	03/28/17 LM	SW846 6010C	<sup>1</sup> SW846 3050B <sup>2</sup>
Zinc	16.9	0.88	0.22	0.13	mg/kg	1	03/28/17	03/28/17 LM	SW846 6010C	<sup>1</sup> SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA13933

(2) Prep QC Batch: MP31871

(a) Sample air dried prior to analysis; percent solids reported as 100%.

LOQ = Limit of Quantitation

DL = Detection Limit

U = Indicates a result &lt; LOD

LOD = Limit of Detection

B = Analyte found in associated blank

J = Indicates a result &gt; = DL (MDL) but &lt; LOQ

Report of Analysis

Client Sample ID:	OBOD1-SU09-SS-01				
Lab Sample ID:	FA42152-9A			Date Sampled:	03/16/17
Matrix:	SO - Soil			Date Received:	03/17/17
				Percent Solids:	n/a
Project:	OB/OD Site I, OB Site II, Fort Bliss, TX				

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
pH	8.29		su	1	03/31/17 16:45	VK	SW846 9045D

RL = Reporting Limit

## Misc. Forms

5

### Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- QC Evaluation: DOD QSM5 Limits



ACCUTEST

SGS Accutest Southeast

## Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, FL 32811  
TEL: 407-425-6700 FAX: 407-425-0707  
www.accutest.com

SGS ACCUTEST JOB #:

PAGE 1 OF 1

FA42152

SGS Accutest Quote #

SKIFF #

Client / Reporting Information				Project Information				Analytical Information				Matrix Codes			
Company Name: <b>PARSONS</b>				Project Name: <b>FORT BLESS</b>								<div>DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge OI - Oil LIQ - Other Liquid AIR - Air</div>			
Address: <b>8000 CENTRE PARK DR</b>				Street: <b>FORT BLESS</b>											
City: <b>AUSTIN</b> State: <b>TX</b> Zip: <b>78754</b>				City: <b>EL PASO</b> State: <b>TX</b>											
Project Contact: <b>(b) (6)</b>				Project # <b>104</b>											
Phone #: <b>512 471 5042</b>				Fax #											
Sampler: <b>(b) (6)</b>				Client Purchase Order # <b>10904 (CAPE)</b>											
Sampler				COLLECTION				CONTAINER INFORMATION							
SGS Accutest Sample #	Field ID / Point of Collection	DATE	TIME	SAMPLED BY	MATRIX	TOTAL # OF BOTTLES	OTHER	PCV	PC	PHOS	PHOS	PHOS	PHOS	PHOS	LAB USE ONLY
1	08001-SU08-SS-01	3/15/17	0900	BB	SO	1									
2	08001-SU08-SS-02	3/15/17	0900	BB	SO	1									
3	08001-SU08-SS-03	3/15/17	0900	BB	SO	1									
4	082-SU01-SS-01	3/16/17	0830	BB	SO	1									
5	082-SU01-SS-02	3/16/17	0830	BB	SO	1									
6	082-SU01-SS-03	3/16/17	0830	BB	SO	1									
7	082-SU02-SS-01	3/16/17	1020	BB	SO	1									
8	082-SU03-SS-01	3/16/17	1330	BB	SO	1									
9	08001-SU09-SS-01	3/16/17	1450	BB	SO	1									
Turnaround Time (Business days)				Data Deliverable Information				Comments / Remarks							
10 Day (Business)				Approved By: / Date:				<input type="checkbox"/> COMMERCIAL "A" (RESULTS ONLY)				*ISM - DRY & SIEVE *04 - TAKE ALIQUOT BEFORE DRY SIEVE PROCESS ASAP			
7 Day								<input type="checkbox"/> COMMERCIAL "B" (RESULTS PLUS QC)							
5 Day								<input type="checkbox"/> REDT1 (EPA LEVEL 3)							
3 Day RUSH								<input type="checkbox"/> FULLT1 (EPA LEVEL 4)							
2 Day RUSH								<input type="checkbox"/> EDD'S							
1 Day RUSH															
Other															
Rush T/A Data Available VIA Email or Lablink				Sample Custody must be documented below each time samples change possession, including courier delivery.											
(b) (6)				Received By/Affiliation				Relinquished By/Affiliation				Date Time: <b>3/17/17 1000</b>			
1				2 <b>Fedex</b>				3 <b>Fedex</b>				4 <b>(b) (6)</b>			
5				6				7				8 <b>(b) (6)</b>			
Lab Use Only: Cooler Temperature (a) Celsius: <b>4.4</b>															

FA42152: Chain of Custody

Page 1 of 3

SGS ACCUTEST - ORLANDO SAMPLE RECEIPT CONFIRMATION

SGS ACCUTEST'S JOB NUMBER: FA42152 CLIENT: Parsons PROJECT: Fort Bliss  
 DATE/TIME RECEIVED: 3/17/17 1000 (MM/DD/YY 24:00) NUMBER OF COOLERS RECEIVED: 1  
 METHOD OF DELIVERY: FEDEX UPS ACCUTEST COURIER DELIVERY OTHER: \_\_\_\_\_  
 AIRBILL NUMBERS: 7859 3627 8305

COOLER INFORMATION

- ☐ CUSTODY SEAL NOT PRESENT OR NOT INTACT  
☐ CHAIN OF CUSTODY NOT RECEIVED (COC)  
☐ ANALYSIS REQUESTED IS UNCLEAR OR MISSING  
☐ SAMPLE DATES OR TIMES UNCLEAR OR MISSING  
☐ TEMPERATURE CRITERIA NOT MET

TRIP BLANK INFORMATION

- ☐ TRIP BLANK PROVIDED  
☐ TRIP BLANK NOT PROVIDED  
☐ TRIP BLANK NOT ON COC  
☐ TRIP BLANK INTACT  
☐ TRIP BLANK NOT INTACT  
☐ RECEIVED WATER TRIP BLANK  
☐ RECEIVED SOIL TRIP BLANK

MISC. INFORMATION

NUMBER OF ENCORES ? 25-GRAM \_\_\_\_\_ 5-GRAM \_\_\_\_\_  
 NUMBER OF 5035 FIELD KITS ? \_\_\_\_\_  
 NUMBER OF LAB FILTERED METALS ? \_\_\_\_\_

TEST STRIP LOT#s pH 0-3 230315 pH 10-12 219813A OTHER (specify) \_\_\_\_\_

SUMMARY OF COMMENTS: \_\_\_\_\_

TEMPERATURE INFORMATION

- ☒ AIR THERM ID IR#1 CORR. FACTOR +0.4  
☒ OBSERVED TEMPS: 4.0  
☒ CORRECTED TEMPS: 4.4 (USED FOR LIMS)

SAMPLE INFORMATION

- ☐ INCORRECT NUMBER OF CONTAINERS USED  
☐ SAMPLE RECEIVED IMPROPERLY PRESERVED  
☐ INSUFFICIENT VOLUME FOR ANALYSIS  
☐ DATES/TIMES ON COC DO NOT MATCH SAMPLE LABEL  
☐ ID'S ON COC DO NOT MATCH LABEL  
☐ VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)  
☐ BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED  
☐ NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED  
☐ UNCLEAR FILTERING OR COMPOSITING INSTRUCTIONS  
☐ SAMPLE CONTAINER(S) RECEIVED BROKEN  
☐ 5035 FIELD KITS NOT RECEIVED WITHIN 48 HOURS  
☐ BULK VOA SOIL JARS NOT RECEIVED WITHIN 48 HOURS  
☐ % SOLIDS JAR NOT RECEIVED  
☐ RESIDUAL CHLORINE PRESENT LOT# \_\_\_\_\_

(APPLICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS)

TECHNICIAN SIGNATURE/DATE 3/17/17 REVIEWER SIGNATURE/DATE 3/17/17  
 NF 02/16 receipt confirmation 020116.xls

FA42152: Chain of Custody

Page 2 of 3



## 5.1

37 of 383  
**ACCUTEST**  
 FA42152

# QC Evaluation: DOD QSM5 Limits

Page 1 of 5

**Job Number:** FA42152  
**Account:** Cape Environmental Management Inc.  
**Project:** OB/OD Site I, OB Site II, Fort Bliss, TX  
**Collected:** 03/15/17 thru 03/16/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
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OP64367 SW846 8270D BY SIM

OP64367-BS	83-32-9	Acenaphthene	BSP	REC	61	%	44-111
OP64367-BS	208-96-8	Acenaphthylene	BSP	REC	65	%	39-116
OP64367-BS	120-12-7	Anthracene	BSP	REC	58 <sup>a</sup>	%	50-114
OP64367-BS	56-55-3	Benzo(a)anthracene	BSP	REC	66	%	54-122
OP64367-BS	50-32-8	Benzo(a)pyrene	BSP	REC	61	%	50-125
OP64367-BS	205-99-2	Benzo(b)fluoranthene	BSP	REC	68	%	53-128
OP64367-BS	191-24-2	Benzo(g,h,i)perylene	BSP	REC	61	%	49-127
OP64367-BS	207-08-9	Benzo(k)fluoranthene	BSP	REC	64	%	56-123
OP64367-BS	218-01-9	Chrysene	BSP	REC	70	%	57-118
OP64367-BS	53-70-3	Dibenzo(a,h)anthracene	BSP	REC	61	%	50-129
OP64367-BS	206-44-0	Fluoranthene	BSP	REC	73	%	55-119
OP64367-BS	86-73-7	Fluorene	BSP	REC	67	%	47-114
OP64367-BS	193-39-5	Indeno(1,2,3-cd)pyrene	BSP	REC	64	%	49-130
OP64367-BS	90-12-0	1-Methylnaphthalene	BSP	REC	59	%	43-111
OP64367-BS	91-57-6	2-Methylnaphthalene	BSP	REC	55	%	39-114
OP64367-BS	91-20-3	Naphthalene	BSP	REC	56	%	38-111
OP64367-BS	85-01-8	Phenanthrene	BSP	REC	63	%	49-113
OP64367-BS	129-00-0	Pyrene	BSP	REC	61	%	55-117
OP64367-BS	4165-60-0	Nitrobenzene-d5	BSP	SURR	67	%	44-125
OP64367-BS	321-60-8	2-Fluorobiphenyl	BSP	SURR	79	%	46-115
OP64367-BS	1718-51-0	Terphenyl-d14	BSP	SURR	65	%	58-133
OP64367-MS	83-32-9	Acenaphthene	MS	REC	71	%	44-111
OP64367-MS	208-96-8	Acenaphthylene	MS	REC	71	%	39-116
OP64367-MS	120-12-7	Anthracene	MS	REC	66	%	50-114
OP64367-MS	56-55-3	Benzo(a)anthracene	MS	REC	72	%	54-122
OP64367-MS	50-32-8	Benzo(a)pyrene	MS	REC	69	%	50-125
OP64367-MS	205-99-2	Benzo(b)fluoranthene	MS	REC	74	%	53-128
OP64367-MS	191-24-2	Benzo(g,h,i)perylene	MS	REC	67	%	49-127
OP64367-MS	207-08-9	Benzo(k)fluoranthene	MS	REC	71	%	56-123
OP64367-MS	218-01-9	Chrysene	MS	REC	74	%	57-118
OP64367-MS	53-70-3	Dibenzo(a,h)anthracene	MS	REC	66	%	50-129
OP64367-MS	206-44-0	Fluoranthene	MS	REC	81	%	55-119
OP64367-MS	86-73-7	Fluorene	MS	REC	75	%	47-114
OP64367-MS	193-39-5	Indeno(1,2,3-cd)pyrene	MS	REC	72	%	49-130
OP64367-MS	90-12-0	1-Methylnaphthalene	MS	REC	63	%	43-111
OP64367-MS	91-57-6	2-Methylnaphthalene	MS	REC	61	%	39-114
OP64367-MS	91-20-3	Naphthalene	MS	REC	62	%	38-111
OP64367-MS	85-01-8	Phenanthrene	MS	REC	72	%	49-113
OP64367-MS	129-00-0	Pyrene	MS	REC	65	%	55-117
OP64367-MS	4165-60-0	Nitrobenzene-d5	MS	SURR	69	%	44-125
OP64367-MS	321-60-8	2-Fluorobiphenyl	MS	SURR	82	%	46-115
OP64367-MS	1718-51-0	Terphenyl-d14	MS	SURR	64	%	58-133

\* Sample used for QC is not from job FA42152

# QC Evaluation: DOD QSM5 Limits

Page 2 of 5

**Job Number:** FA42152  
**Account:** Cape Environmental Management Inc.  
**Project:** OB/OD Site I, OB Site II, Fort Bliss, TX  
**Collected:** 03/15/17 thru 03/16/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP64367-MSD	83-32-9	Acenaphthene	MSD	REC	73	%	44-111
OP64367-MSD	83-32-9	Acenaphthene	MSD	RPD	2	%	20
OP64367-MSD	208-96-8	Acenaphthylene	MSD	REC	74	%	39-116
OP64367-MSD	208-96-8	Acenaphthylene	MSD	RPD	0	%	20
OP64367-MSD	120-12-7	Anthracene	MSD	REC	67	%	50-114
OP64367-MSD	120-12-7	Anthracene	MSD	RPD	2	%	20
OP64367-MSD	56-55-3	Benzo(a)anthracene	MSD	REC	77	%	54-122
OP64367-MSD	56-55-3	Benzo(a)anthracene	MSD	RPD	2	%	20
OP64367-MSD	50-32-8	Benzo(a)pyrene	MSD	REC	72	%	50-125
OP64367-MSD	50-32-8	Benzo(a)pyrene	MSD	RPD	0	%	20
OP64367-MSD	205-99-2	Benzo(b)fluoranthene	MSD	REC	76	%	53-128
OP64367-MSD	205-99-2	Benzo(b)fluoranthene	MSD	RPD	2	%	20
OP64367-MSD	191-24-2	Benzo(g,h,i)perylene	MSD	REC	69	%	49-127
OP64367-MSD	191-24-2	Benzo(g,h,i)perylene	MSD	RPD	1	%	20
OP64367-MSD	207-08-9	Benzo(k)fluoranthene	MSD	REC	75	%	56-123
OP64367-MSD	207-08-9	Benzo(k)fluoranthene	MSD	RPD	2	%	20
OP64367-MSD	218-01-9	Chrysene	MSD	REC	81	%	57-118
OP64367-MSD	218-01-9	Chrysene	MSD	RPD	5	%	20
OP64367-MSD	53-70-3	Dibenzo(a,h)anthracene	MSD	REC	71	%	50-129
OP64367-MSD	53-70-3	Dibenzo(a,h)anthracene	MSD	RPD	3	%	20
OP64367-MSD	206-44-0	Fluoranthene	MSD	REC	84	%	55-119
OP64367-MSD	206-44-0	Fluoranthene	MSD	RPD	1	%	20
OP64367-MSD	86-73-7	Fluorene	MSD	REC	82	%	47-114
OP64367-MSD	86-73-7	Fluorene	MSD	RPD	4	%	20
OP64367-MSD	193-39-5	Indeno(1,2,3-cd)pyrene	MSD	REC	75	%	49-130
OP64367-MSD	193-39-5	Indeno(1,2,3-cd)pyrene	MSD	RPD	0	%	20
OP64367-MSD	90-12-0	1-Methylnaphthalene	MSD	REC	65	%	43-111
OP64367-MSD	90-12-0	1-Methylnaphthalene	MSD	RPD	0	%	20
OP64367-MSD	91-57-6	2-Methylnaphthalene	MSD	REC	63	%	39-114
OP64367-MSD	91-57-6	2-Methylnaphthalene	MSD	RPD	1	%	20
OP64367-MSD	91-20-3	Naphthalene	MSD	REC	64	%	38-111
OP64367-MSD	91-20-3	Naphthalene	MSD	RPD	1	%	20
OP64367-MSD	85-01-8	Phenanthrene	MSD	REC	75	%	49-113
OP64367-MSD	85-01-8	Phenanthrene	MSD	RPD	0	%	20
OP64367-MSD	129-00-0	Pyrene	MSD	REC	69	%	55-117
OP64367-MSD	129-00-0	Pyrene	MSD	RPD	1	%	20
OP64367-MSD	4165-60-0	Nitrobenzene-d5	MSD	SURR	77	%	44-125
OP64367-MSD	321-60-8	2-Fluorobiphenyl	MSD	SURR	88	%	46-115
OP64367-MSD	1718-51-0	Terphenyl-d14	MSD	SURR	70	%	58-133
OP64367-MB	4165-60-0	Nitrobenzene-d5	MB	SURR	71	%	44-125
OP64367-MB	321-60-8	2-Fluorobiphenyl	MB	SURR	78	%	46-115
OP64367-MB	1718-51-0	Terphenyl-d14	MB	SURR	61	%	58-133
FA42152-1	4165-60-0	Nitrobenzene-d5	SAMP	SURR	55	%	44-125
FA42152-1	321-60-8	2-Fluorobiphenyl	SAMP	SURR	58	%	46-115
FA42152-1	1718-51-0	Terphenyl-d14	SAMP	SURR	53 <sup>b</sup>	%	58-133

\* Sample used for QC is not from job FA42152

# QC Evaluation: DOD QSM5 Limits

Page 3 of 5

**Job Number:** FA42152  
**Account:** Cape Environmental Management Inc.  
**Project:** OB/OD Site I, OB Site II, Fort Bliss, TX  
**Collected:** 03/15/17 thru 03/16/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA42152-2	4165-60-0	Nitrobenzene-d5	SAMP	SURR	58	%	44-125
FA42152-2	321-60-8	2-Fluorobiphenyl	SAMP	SURR	68	%	46-115
FA42152-2	1718-51-0	Terphenyl-d14	SAMP	SURR	55 <sup>b</sup>	%	58-133
FA42152-3	4165-60-0	Nitrobenzene-d5	SAMP	SURR	53	%	44-125
FA42152-3	321-60-8	2-Fluorobiphenyl	SAMP	SURR	65	%	46-115
FA42152-3	1718-51-0	Terphenyl-d14	SAMP	SURR	54 <sup>b</sup>	%	58-133
FA42152-4	4165-60-0	Nitrobenzene-d5	SAMP	SURR	54	%	44-125
FA42152-4	321-60-8	2-Fluorobiphenyl	SAMP	SURR	61	%	46-115
FA42152-4	1718-51-0	Terphenyl-d14	SAMP	SURR	54 <sup>b</sup>	%	58-133
FA42152-5	4165-60-0	Nitrobenzene-d5	SAMP	SURR	57	%	44-125
FA42152-5	321-60-8	2-Fluorobiphenyl	SAMP	SURR	65	%	46-115
FA42152-5	1718-51-0	Terphenyl-d14	SAMP	SURR	53 <sup>b</sup>	%	58-133
FA42152-6	4165-60-0	Nitrobenzene-d5	SAMP	SURR	63	%	44-125
FA42152-6	321-60-8	2-Fluorobiphenyl	SAMP	SURR	74	%	46-115
FA42152-6	1718-51-0	Terphenyl-d14	SAMP	SURR	57 <sup>b</sup>	%	58-133
FA42152-7	4165-60-0	Nitrobenzene-d5	SAMP	SURR	59	%	44-125
FA42152-7	321-60-8	2-Fluorobiphenyl	SAMP	SURR	71	%	46-115
FA42152-7	1718-51-0	Terphenyl-d14	SAMP	SURR	63	%	58-133
FA42152-8	4165-60-0	Nitrobenzene-d5	SAMP	SURR	62	%	44-125
FA42152-8	321-60-8	2-Fluorobiphenyl	SAMP	SURR	69	%	46-115
FA42152-8	1718-51-0	Terphenyl-d14	SAMP	SURR	61	%	58-133
FA42152-9	4165-60-0	Nitrobenzene-d5	SAMP	SURR	62	%	44-125
FA42152-9	321-60-8	2-Fluorobiphenyl	SAMP	SURR	70	%	46-115
FA42152-9	1718-51-0	Terphenyl-d14	SAMP	SURR	61	%	58-133
OP64396	SW846 8330B						
OP64396-BS	2691-41-0	HMX	BSP	REC	98	%	74-124
OP64396-BS	121-82-4	RDX	BSP	REC	79	%	67-129
OP64396-BS	99-65-0	1,3-Dinitrobenzene	BSP	REC	82	%	73-119
OP64396-BS	606-20-2	2,6-Dinitrotoluene	BSP	REC	86	%	79-117
OP64396-BS	121-14-2	2,4-Dinitrotoluene	BSP	REC	84	%	75-121
OP64396-BS	35572-78-2	2-amino-4,6-Dinitrotoluene	BSP	REC	90	%	71-123
OP64396-BS	19406-51-0	4-amino-2,6-Dinitrotoluene	BSP	REC	81	%	64-127
OP64396-BS	98-95-3	Nitrobenzene	BSP	REC	92	%	67-129
OP64396-BS	88-72-2	o-Nitrotoluene	BSP	REC	92	%	70-124
OP64396-BS	99-08-1	m-Nitrotoluene	BSP	REC	106	%	67-129
OP64396-BS	99-99-0	p-Nitrotoluene	BSP	REC	92	%	71-124
OP64396-BS	479-45-8	Tetryl	BSP	REC	79	%	68-135
OP64396-BS	99-35-4	1,3,5-Trinitrobenzene	BSP	REC	85	%	80-116
OP64396-BS	118-96-7	2,4,6-Trinitrotoluene	BSP	REC	71	%	71-120
OP64396-BS	55-63-0	Nitroglycerine	BSP	REC	96	%	73-124
OP64396-BS	78-11-5	PETN	BSP	REC	94	%	72-128
OP64396-MS	2691-41-0	HMX	MS	REC	81	%	74-124
OP64396-MS	121-82-4	RDX	MS	REC	75	%	67-129

\* Sample used for QC is not from job FA42152

# QC Evaluation: DOD QSM5 Limits

Page 4 of 5

**Job Number:** FA42152  
**Account:** Cape Environmental Management Inc.  
**Project:** OB/OD Site I, OB Site II, Fort Bliss, TX  
**Collected:** 03/15/17 thru 03/16/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP64396-MS	99-65-0	1,3-Dinitrobenzene	MS	REC	75	%	73-119
OP64396-MS	606-20-2	2,6-Dinitrotoluene	MS	REC	79	%	79-117
OP64396-MS	121-14-2	2,4-Dinitrotoluene	MS	REC	80	%	75-121
OP64396-MS	35572-78-2	2-amino-4,6-Dinitrotoluene	MS	REC	83	%	71-123
OP64396-MS	19406-51-0	4-amino-2,6-Dinitrotoluene	MS	REC	80	%	64-127
OP64396-MS	98-95-3	Nitrobenzene	MS	REC	82	%	67-129
OP64396-MS	88-72-2	o-Nitrotoluene	MS	REC	81	%	70-124
OP64396-MS	99-08-1	m-Nitrotoluene	MS	REC	80	%	67-129
OP64396-MS	99-99-0	p-Nitrotoluene	MS	REC	83	%	71-124
OP64396-MS	479-45-8	Tetryl	MS	REC	143 <sup>b</sup>	%	68-135
OP64396-MS	99-35-4	1,3,5-Trinitrobenzene	MS	REC	68 <sup>b</sup>	%	80-116
OP64396-MS	118-96-7	2,4,6-Trinitrotoluene	MS	REC	123 <sup>b</sup>	%	71-120
OP64396-MS	55-63-0	Nitroglycerine	MS	REC	90	%	73-124
OP64396-MS	78-11-5	PETN	MS	REC	95	%	72-128
OP64396-MSD	2691-41-0	HMX	MSD	REC	78	%	74-124
OP64396-MSD	2691-41-0	HMX	MSD	RPD	4	%	20
OP64396-MSD	121-82-4	RDX	MSD	REC	80	%	67-129
OP64396-MSD	121-82-4	RDX	MSD	RPD	7	%	20
OP64396-MSD	99-65-0	1,3-Dinitrobenzene	MSD	REC	77	%	73-119
OP64396-MSD	99-65-0	1,3-Dinitrobenzene	MSD	RPD	3	%	20
OP64396-MSD	606-20-2	2,6-Dinitrotoluene	MSD	REC	81	%	79-117
OP64396-MSD	606-20-2	2,6-Dinitrotoluene	MSD	RPD	2	%	20
OP64396-MSD	121-14-2	2,4-Dinitrotoluene	MSD	REC	82	%	75-121
OP64396-MSD	121-14-2	2,4-Dinitrotoluene	MSD	RPD	2	%	20
OP64396-MSD	35572-78-2	2-amino-4,6-Dinitrotoluene	MSD	REC	84	%	71-123
OP64396-MSD	35572-78-2	2-amino-4,6-Dinitrotoluene	MSD	RPD	2	%	20
OP64396-MSD	19406-51-0	4-amino-2,6-Dinitrotoluene	MSD	REC	82	%	64-127
OP64396-MSD	19406-51-0	4-amino-2,6-Dinitrotoluene	MSD	RPD	2	%	20
OP64396-MSD	98-95-3	Nitrobenzene	MSD	REC	83	%	67-129
OP64396-MSD	98-95-3	Nitrobenzene	MSD	RPD	1	%	20
OP64396-MSD	88-72-2	o-Nitrotoluene	MSD	REC	84	%	70-124
OP64396-MSD	88-72-2	o-Nitrotoluene	MSD	RPD	3	%	20
OP64396-MSD	99-08-1	m-Nitrotoluene	MSD	REC	82	%	67-129
OP64396-MSD	99-08-1	m-Nitrotoluene	MSD	RPD	3	%	20
OP64396-MSD	99-99-0	p-Nitrotoluene	MSD	REC	85	%	71-124
OP64396-MSD	99-99-0	p-Nitrotoluene	MSD	RPD	2	%	20
OP64396-MSD	479-45-8	Tetryl	MSD	REC	146 <sup>b</sup>	%	68-135
OP64396-MSD	479-45-8	Tetryl	MSD	RPD	2	%	20
OP64396-MSD	99-35-4	1,3,5-Trinitrobenzene	MSD	REC	69 <sup>b</sup>	%	80-116
OP64396-MSD	99-35-4	1,3,5-Trinitrobenzene	MSD	RPD	2	%	20
OP64396-MSD	118-96-7	2,4,6-Trinitrotoluene	MSD	REC	124 <sup>b</sup>	%	71-120
OP64396-MSD	118-96-7	2,4,6-Trinitrotoluene	MSD	RPD	1	%	20
OP64396-MSD	55-63-0	Nitroglycerine	MSD	REC	91	%	73-124
OP64396-MSD	55-63-0	Nitroglycerine	MSD	RPD	2	%	20
OP64396-MSD	78-11-5	PETN	MSD	REC	96	%	72-128

\* Sample used for QC is not from job FA42152

## QC Evaluation: DOD QSM5 Limits

Page 5 of 5

**Job Number:** FA42152  
**Account:** Cape Environmental Management Inc.  
**Project:** OB/OD Site I, OB Site II, Fort Bliss, TX  
**Collected:** 03/15/17 thru 03/16/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP64396-MSD	78-11-5	PETN	MSD	RPD	1	%	20
OP64396-DUP	2691-41-0	HMX	DUP	RPD	0	%	20
OP64396-DUP	121-82-4	RDX	DUP	RPD	0	%	20
OP64396-DUP	99-65-0	1,3-Dinitrobenzene	DUP	RPD	0	%	20
OP64396-DUP	606-20-2	2,6-Dinitrotoluene	DUP	RPD	0	%	20
OP64396-DUP	121-14-2	2,4-Dinitrotoluene	DUP	RPD	0	%	20
OP64396-DUP	35572-78-2	2-amino-4,6-Dinitrotoluene	DUP	RPD	0	%	20
OP64396-DUP	19406-51-0	4-amino-2,6-Dinitrotoluene	DUP	RPD	0	%	20
OP64396-DUP	98-95-3	Nitrobenzene	DUP	RPD	0	%	20
OP64396-DUP	88-72-2	o-Nitrotoluene	DUP	RPD	0	%	20
OP64396-DUP	99-08-1	m-Nitrotoluene	DUP	RPD	0	%	20
OP64396-DUP	99-99-0	p-Nitrotoluene	DUP	RPD	0	%	20
OP64396-DUP	479-45-8	Tetryl	DUP	RPD	0	%	20
OP64396-DUP	99-35-4	1,3,5-Trinitrobenzene	DUP	RPD	0	%	20
OP64396-DUP	118-96-7	2,4,6-Trinitrotoluene	DUP	RPD	0	%	20
OP64396-DUP	55-63-0	Nitroglycerine	DUP	RPD	0	%	20
OP64396-DUP	78-11-5	PETN	DUP	RPD	0	%	20
OP64396-DUP2	2691-41-0	HMX	DUP	RPD	0	%	20
OP64396-DUP2	121-82-4	RDX	DUP	RPD	0	%	20
OP64396-DUP2	99-65-0	1,3-Dinitrobenzene	DUP	RPD	0	%	20
OP64396-DUP2	606-20-2	2,6-Dinitrotoluene	DUP	RPD	0	%	20
OP64396-DUP2	121-14-2	2,4-Dinitrotoluene	DUP	RPD	0	%	20
OP64396-DUP2	35572-78-2	2-amino-4,6-Dinitrotoluene	DUP	RPD	0	%	20
OP64396-DUP2	19406-51-0	4-amino-2,6-Dinitrotoluene	DUP	RPD	0	%	20
OP64396-DUP2	98-95-3	Nitrobenzene	DUP	RPD	0	%	20
OP64396-DUP2	88-72-2	o-Nitrotoluene	DUP	RPD	0	%	20
OP64396-DUP2	99-08-1	m-Nitrotoluene	DUP	RPD	0	%	20
OP64396-DUP2	99-99-0	p-Nitrotoluene	DUP	RPD	0	%	20
OP64396-DUP2	479-45-8	Tetryl	DUP	RPD	0	%	20
OP64396-DUP2	99-35-4	1,3,5-Trinitrobenzene	DUP	RPD	0	%	20
OP64396-DUP2	118-96-7	2,4,6-Trinitrotoluene	DUP	RPD	0	%	20
OP64396-DUP2	55-63-0	Nitroglycerine	DUP	RPD	0	%	20
OP64396-DUP2	78-11-5	PETN	DUP	RPD	0	%	20
MP31871	SW846 6010C						
MP31871-B1	7429-90-5	Aluminum	BSP	REC	99.3	%	74-119
MP31871-B1	7440-36-0	Antimony	BSP	REC	98.8	%	79-114
MP31871-B1	7440-50-8	Copper	BSP	REC	100	%	81-117
MP31871-B1	7439-92-1	Lead	BSP	REC	95.2	%	81-112
MP31871-B1	7440-66-6	Zinc	BSP	REC	98.8	%	82-113

- (a) Sporadic marginal failure.  
(b) Outside DoD QSM control limits.

\* Sample used for QC is not from job FA42152

## GC/MS Semi-volatiles

9

### QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (DFTPP)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries



## Method Blank Summary

Page 1 of 1

Job Number: FA42152

Account: CAPEGAA Cape Environmental Management Inc.

Project: OB/OD Site I, OB Site II, Fort Bliss, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP64367-MB	W098389.D	1	03/29/17	FS	03/28/17	OP64367	SW4369

The QC reported here applies to the following samples:

Method: SW846 8270D BY SIM

FA42152-1, FA42152-2, FA42152-3, FA42152-4, FA42152-5, FA42152-6, FA42152-7, FA42152-8, FA42152-9

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	67	27	ug/kg	
208-96-8	Acenaphthylene	ND	67	27	ug/kg	
120-12-7	Anthracene	ND	67	17	ug/kg	
56-55-3	Benzo(a)anthracene	ND	13	3.3	ug/kg	
50-32-8	Benzo(a)pyrene	ND	13	3.3	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	13	3.3	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	13	3.3	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	13	3.3	ug/kg	
218-01-9	Chrysene	ND	13	3.3	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	13	3.3	ug/kg	
206-44-0	Fluoranthene	ND	67	17	ug/kg	
86-73-7	Fluorene	ND	67	27	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	13	3.3	ug/kg	
90-12-0	1-Methylnaphthalene	ND	67	27	ug/kg	
91-57-6	2-Methylnaphthalene	ND	67	27	ug/kg	
91-20-3	Naphthalene	ND	67	27	ug/kg	
85-01-8	Phenanthrene	ND	67	17	ug/kg	
129-00-0	Pyrene	ND	67	17	ug/kg	

CAS No.	Surrogate Recoveries	Limits
4165-60-0	Nitrobenzene-d5	71% 40-105%
321-60-8	2-Fluorobiphenyl	78% 43-107%
1718-51-0	Terphenyl-d14	61% 45-119%



**Blank Spike Summary**

Page 1 of 1

**Job Number:** FA42152**Account:** CAPEGAA Cape Environmental Management Inc.**Project:** OB/OD Site I, OB Site II, Fort Bliss, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP64367-BS	W098390.D	1	03/29/17	FS	03/28/17	OP64367	SW4369

**The QC reported here applies to the following samples:****Method:** SW846 8270D BY SIM

FA42152-1, FA42152-2, FA42152-3, FA42152-4, FA42152-5, FA42152-6, FA42152-7, FA42152-8, FA42152-9

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
83-32-9	Acenaphthene	667	407	61	53-100
208-96-8	Acenaphthylene	667	436	65	51-100
120-12-7	Anthracene	333	195	58* a	60-102
56-55-3	Benzo(a)anthracene	333	220	66	60-106
50-32-8	Benzo(a)pyrene	333	205	61	58-105
205-99-2	Benzo(b)fluoranthene	333	227	68	59-112
191-24-2	Benzo(g,h,i)perylene	333	204	61	56-109
207-08-9	Benzo(k)fluoranthene	333	215	64	58-109
218-01-9	Chrysene	333	232	70	62-104
53-70-3	Dibenzo(a,h)anthracene	333	202	61	55-110
206-44-0	Fluoranthene	667	487	73	59-109
86-73-7	Fluorene	667	445	67	56-104
193-39-5	Indeno(1,2,3-cd)pyrene	333	214	64	54-110
90-12-0	1-Methylnaphthalene	667	392	59	50-101
91-57-6	2-Methylnaphthalene	667	367	55	49-100
91-20-3	Naphthalene	667	372	56	49-101
85-01-8	Phenanthrene	667	420	63	57-104
129-00-0	Pyrene	667	404	61	58-106

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	67%	40-105%
321-60-8	2-Fluorobiphenyl	79%	43-107%
1718-51-0	Terphenyl-d14	65%	45-119%

(a) Sporadic marginal failure.

\* = Outside of Control Limits.

## Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: FA42152

Account: CAPEGAA Cape Environmental Management Inc.

Project: OB/OD Site I, OB Site II, Fort Bliss, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP64367-MS	W098399.D	1	03/29/17	FS	03/28/17	OP64367	SW4369
OP64367-MSD	W098400.D	1	03/29/17	FS	03/28/17	OP64367	SW4369
FA42152-8	W098398.D	1	03/29/17	FS	03/28/17	OP64367	SW4369

The QC reported here applies to the following samples:

Method: SW846 8270D BY SIM

FA42152-1, FA42152-2, FA42152-3, FA42152-4, FA42152-5, FA42152-6, FA42152-7, FA42152-8, FA42152-9

CAS No.	Compound	FA42152-8 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	67 U		667	475	71	641	466	73	2	53-100/28
208-96-8	Acenaphthylene	67 U		667	472	71	641	474	74	0	51-100/25
120-12-7	Anthracene	67 U		333	220	66	321	216	67	2	60-102/29
56-55-3	Benzo(a)anthracene	3.4	J	333	244	72	321	250	77	2	60-106/30
50-32-8	Benzo(a)pyrene	5.7	J	333	235	69	321	235	72	0	58-105/30
205-99-2	Benzo(b)fluoranthene	10.0	J	333	258	74	321	254	76	2	59-112/33
191-24-2	Benzo(g,h,i)perylene	5.2	J	333	229	67	321	227	69	1	56-109/31
207-08-9	Benzo(k)fluoranthene	3.3	J	333	240	71	321	244	75	2	58-109/33
218-01-9	Chrysene	6.6	J	333	253	74	321	265	81	5	62-104/30
53-70-3	Dibenzo(a,h)anthracene	13 U		333	220	66	321	226	71	3	55-110/31
206-44-0	Fluoranthene	67 U		667	543	81	641	536	84	1	59-109/29
86-73-7	Fluorene	67 U		667	503	75	641	524	82	4	56-104/27
193-39-5	Indeno(1,2,3-cd)pyrene	5.7	J	333	247	72	321	247	75	0	54-110/32
90-12-0	1-Methylnaphthalene	67 U		667	417	63	641	415	65	0	50-101/30
91-57-6	2-Methylnaphthalene	67 U		667	408	61	641	405	63	1	49-100/26
91-20-3	Naphthalene	67 U		667	414	62	641	408	64	1	49-101/28
85-01-8	Phenanthrene	67 U		667	480	72	641	482	75	0	57-104/27
129-00-0	Pyrene	67 U		667	436	65	641	442	69	1	58-106/29

CAS No.	Surrogate Recoveries	MS	MSD	FA42152-8	Limits
4165-60-0	Nitrobenzene-d5	69%	77%	62%	40-105%
321-60-8	2-Fluorobiphenyl	82%	88%	69%	43-107%
1718-51-0	Terphenyl-d14	64%	70%	61%	45-119%

\* = Outside of Control Limits.

**Instrument Performance Check (DFTPP)****Job Number:** FA42152**Account:** CAPEGAA Cape Environmental Management Inc.**Project:** OB/OD Site I, OB Site II, Fort Bliss, TX**Sample:** SW4339-DFTPP**Injection Date:** 02/13/17**Lab File ID:** W097282.D**Injection Time:** 18:34**Instrument ID:** GCMSW

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	135535	44.8	Pass
68	Less than 2.0% of mass 69	0	0.00 (0.00) <sup>a</sup>	Pass
69	Mass 69 relative abundance	120820	39.9	Pass
70	Less than 2.0% of mass 69	290	0.10 (0.24) <sup>a</sup>	Pass
127	40.0 - 60.0% of mass 198	140221	46.4	Pass
197	Less than 1.0% of mass 198	0	0.00	Pass
198	Base peak, 100% relative abundance	302442	100.0	Pass
199	5.0 - 9.0% of mass 198	20920	6.92	Pass
275	10.0 - 30.0% of mass 198	74467	24.6	Pass
365	1.0 - 100.0% of mass 198	5711	1.89	Pass
441	Present, but less than mass 443	25594	8.46 (82.5) <sup>b</sup>	Pass
442	40.0 - 100.0% of mass 198	161074	53.3	Pass
443	17.0 - 23.0% of mass 442	31036	10.3 (19.3) <sup>c</sup>	Pass

(a) Value is % of mass 69

(b) Value is % of mass 443

(c) Value is % of mass 442

**This check applies to the following Samples, MS, MSD, Blanks, and Standards:**

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
SW4339-IC4339	W097284.D	02/13/17	19:10	00:36	Initial cal 1
SW4339-IC4339	W097285.D	02/13/17	19:33	00:59	Initial cal 2
SW4339-IC4339	W097286.D	02/13/17	19:55	01:21	Initial cal 3
SW4339-ICC4339	W097287.D	02/13/17	20:18	01:44	Initial cal 4
SW4339-IC4339	W097288.D	02/13/17	20:41	02:07	Initial cal 5
SW4339-IC4339	W097289.D	02/13/17	21:04	02:30	Initial cal 6
SW4339-IC4339	W097290.D	02/13/17	21:27	02:53	Initial cal 7
SW4339-ICV4339	W097291.D	02/13/17	21:49	03:15	Initial cal verification 4
OP63693-MB	W097292.D	02/13/17	22:12	03:38	Method Blank
ZZZZZZ	W097293.D	02/13/17	22:35	04:01	(unrelated sample)
ZZZZZZ	W097294.D	02/13/17	22:58	04:24	(unrelated sample)
ZZZZZZ	W097295.D	02/13/17	23:20	04:46	(unrelated sample)
ZZZZZZ	W097296.D	02/13/17	23:43	05:09	(unrelated sample)
ZZZZZZ	W097297.D	02/14/17	00:06	05:32	(unrelated sample)
ZZZZZZ	W097298.D	02/14/17	00:29	05:55	(unrelated sample)
ZZZZZZ	W097299.D	02/14/17	00:51	06:17	(unrelated sample)
ZZZZZZ	W097300.D	02/14/17	01:14	06:40	(unrelated sample)
ZZZZZZ	W097301.D	02/14/17	01:37	07:03	(unrelated sample)
ZZZZZZ	W097302.D	02/14/17	01:59	07:25	(unrelated sample)

## Instrument Performance Check (DFTPP)

Page 2 of 2

**Job Number:** FA42152  
**Account:** CAPEGAA Cape Environmental Management Inc.  
**Project:** OB/OD Site I, OB Site II, Fort Bliss, TX

<b>Sample:</b>	SW4339-DFTPP	<b>Injection Date:</b>	02/13/17
<b>Lab File ID:</b>	W097282.D	<b>Injection Time:</b>	18:34
<b>Instrument ID:</b>	GCMSW		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	W097303.D	02/14/17	02:22	07:48	(unrelated sample)
ZZZZZZ	W097304.D	02/14/17	02:45	08:11	(unrelated sample)
ZZZZZZ	W097305.D	02/14/17	03:07	08:33	(unrelated sample)
ZZZZZZ	W097306.D	02/14/17	03:30	08:56	(unrelated sample)
SW4339-ECC4339	W097307.D	02/14/17	08:01	13:27	Ending cal 4

**Instrument Performance Check (DFTPP)**

Page 1 of 2

**Job Number:** FA42152  
**Account:** CAPEGAA Cape Environmental Management Inc.  
**Project:** OB/OD Site I, OB Site II, Fort Bliss, TX

<b>Sample:</b> SW4369-DFTPP	<b>Injection Date:</b> 03/29/17
<b>Lab File ID:</b> W098383.D	<b>Injection Time:</b> 09:01
<b>Instrument ID:</b> GCMSW	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	103809	44.1	Pass
68	Less than 2.0% of mass 69	0	0.00 (0.00) <sup>a</sup>	Pass
69	Mass 69 relative abundance	91907	39.0	Pass
70	Less than 2.0% of mass 69	429	0.18 (0.47) <sup>a</sup>	Pass
127	40.0 - 60.0% of mass 198	110321	46.9	Pass
197	Less than 1.0% of mass 198	0	0.00	Pass
198	Base peak, 100% relative abundance	235477	100.0	Pass
199	5.0 - 9.0% of mass 198	17021	7.23	Pass
275	10.0 - 30.0% of mass 198	58170	24.7	Pass
365	1.0 - 100.0% of mass 198	6703	2.85	Pass
441	Present, but less than mass 443	20141	8.55 (76.4) <sup>b</sup>	Pass
442	40.0 - 100.0% of mass 198	134874	57.3	Pass
443	17.0 - 23.0% of mass 442	26346	11.2 (19.5) <sup>c</sup>	Pass

(a) Value is % of mass 69

(b) Value is % of mass 443

(c) Value is % of mass 442

**This check applies to the following Samples, MS, MSD, Blanks, and Standards:**

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
SW4369-CC4339	W098384.D	03/29/17	09:40	00:39	Continuing cal 4
OP64355-BS	W098385.D	03/29/17	10:03	01:02	Blank Spike
OP64356-BS	W098386.D	03/29/17	10:26	01:25	Blank Spike
OP64357-MB	W098387.D	03/29/17	10:49	01:48	Method Blank
OP64357-BS	W098388.D	03/29/17	11:12	02:11	Blank Spike
OP64367-MB	W098389.D	03/29/17	11:35	02:34	Method Blank
OP64367-BS	W098390.D	03/29/17	11:57	02:56	Blank Spike
FA42152-1	W098391.D	03/29/17	12:20	03:19	OBOD1-SU08-SS-01
FA42152-2	W098392.D	03/29/17	12:43	03:42	OBOD1-SU08-SS-02
FA42152-3	W098393.D	03/29/17	13:06	04:05	OBOD1-SU08-SS-03
FA42152-4	W098394.D	03/29/17	13:29	04:28	OB2-SU01-SS-01
FA42152-5	W098395.D	03/29/17	13:52	04:51	OB2-SU01-SS-02
FA42152-6	W098396.D	03/29/17	14:14	05:13	OB2-SU01-SS-03
FA42152-7	W098397.D	03/29/17	14:37	05:36	OB2-SU02-SS-01
FA42152-8	W098398.D	03/29/17	15:00	05:59	OB2-SU03-SS-01
OP64367-MS	W098399.D	03/29/17	15:23	06:22	Matrix Spike
OP64367-MSD	W098400.D	03/29/17	15:47	06:46	Matrix Spike Duplicate
FA42152-9	W098401.D	03/29/17	16:10	07:09	OBOD1-SU09-SS-01
ZZZZZ	W098402.D	03/29/17	16:33	07:32	(unrelated sample)

## Instrument Performance Check (DFTPP)

Page 2 of 2

**Job Number:** FA42152  
**Account:** CAPEGAA Cape Environmental Management Inc.  
**Project:** OB/OD Site I, OB Site II, Fort Bliss, TX

**Sample:** SW4369-DFTPP  
**Lab File ID:** W098383.D  
**Instrument ID:** GCMSW  
**Injection Date:** 03/29/17  
**Injection Time:** 09:01

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	W098403.D	03/29/17	16:56	07:55	(unrelated sample)
ZZZZZZ	W098404.D	03/29/17	17:19	08:18	(unrelated sample)
ZZZZZZ	W098405.D	03/29/17	17:42	08:41	(unrelated sample)
ZZZZZZ	W098406.D	03/29/17	18:05	09:04	(unrelated sample)
ZZZZZZ	W098407.D	03/29/17	18:28	09:27	(unrelated sample)
FA41394-15R	W098410.D	03/29/17	19:37	10:36	(used for QC only; not part of job FA42152)
OP64357-MS	W098411.D	03/29/17	20:00	10:59	Matrix Spike
OP64357-MSD	W098412.D	03/29/17	20:23	11:22	Matrix Spike Duplicate
ZZZZZZ	W098413.D	03/29/17	20:46	11:45	(unrelated sample)
SW4369-ECC4339	W098415.D	03/29/17	21:32	12:31	Ending cal 4

# Semivolatile Internal Standard Area Summary

Page 1 of 2

**Job Number:** FA42152  
**Account:** CAPEGAA Cape Environmental Management Inc.  
**Project:** OB/OD Site I, OB Site II, Fort Bliss, TX

<b>Check Std:</b> SW4369-CC4339	<b>Injection Date:</b> 03/29/17
<b>Lab File ID:</b> W098384.D	<b>Injection Time:</b> 09:40
<b>Instrument ID:</b> GCMSW	<b>Method:</b> SW846 8270D BY SIM

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Initial Cal <sup>a</sup>	134355	5.59	79791	7.14	127548	8.46	100499	11.27	91230	13.73
Check Std <sup>b</sup>	111403	5.53	62852	7.09	104586	8.41	79334	11.19	71183	13.64
Upper Limit <sup>c</sup>	222806	6.03	125704	7.59	209172	8.91	158668	11.69	142366	14.14
Lower Limit <sup>d</sup>	55702	5.03	31426	6.59	52293	7.91	39667	10.69	35592	13.14

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
OP64355-BS <sup>e</sup>	95146	5.53	50864	7.09	81858	8.41	63266	11.19	59150	13.63
OP64356-BS <sup>e</sup>	97288	5.53	52154	7.08	87060	8.40	67608	11.19	60245	13.63
OP64357-MB	78674	5.53	44480	7.08	73391	8.40	63780	11.19	58504	13.63
OP64357-BS	88745	5.54	48139	7.08	77339	8.40	60720	11.19	58820	13.63
OP64367-MB	87052	5.53	48874	7.08	73943	8.40	65969	11.19	61647	13.63
OP64367-BS	101119	5.53	52060	7.08	78631	8.40	65021	11.19	64640	13.63
FA42152-1	100777	5.53	58464	7.08	86952	8.40	76248	11.19	71885	13.63
FA42152-2	95770	5.53	50942	7.08	83458	8.40	72003	11.18	67222	13.63
FA42152-3	97837	5.53	50701	7.08	81544	8.40	72799	11.18	64910	13.63
FA42152-4	96589	5.53	55859	7.08	83315	8.40	71454	11.18	67062	13.63
FA42152-5	90329	5.53	49648	7.08	79863	8.40	69325	11.18	64338	13.62
FA42152-6	85224	5.53	46044	7.08	72108	8.40	62163	11.18	59364	13.63
FA42152-7	84623	5.53	45459	7.08	71065	8.40	62452	11.18	55940	13.63
FA42152-8	81834	5.53	45384	7.08	68968	8.40	60956	11.18	58355	13.62
OP64367-MS	81326	5.54	42430	7.08	63815	8.40	54095	11.18	53798	13.62
OP64367-MSD	78501	5.53	40542	7.08	63165	8.40	52970	11.18	52432	13.62
FA42152-9	79338	5.53	42898	7.08	66620	8.40	57335	11.18	54546	13.62
ZZZZZZ	77382	5.53	42661	7.08	67645	8.40	59979	11.18	55992	13.62
ZZZZZZ	77918	5.53	43084	7.08	64867	8.40	59371	11.18	55847	13.62
ZZZZZZ	76004	5.53	41994	7.08	65267	8.40	57719	11.18	57008	13.62
ZZZZZZ	75398	5.53	41109	7.08	63579	8.40	56844	11.18	54030	13.62
ZZZZZZ	74755	5.53	42255	7.08	64661	8.40	53823	11.18	53005	13.63
ZZZZZZ	75896	5.53	42256	7.08	65050	8.40	57077	11.18	54236	13.62
FA41394-15R	72163	5.53	40576	7.08	68110	8.40	57887	11.18	52211	13.62
OP64357-MS	91681	5.53	41872	7.08	67307	8.40	54482	11.18	54000	13.62
OP64357-MSD	89556	5.53	41456	7.08	65886	8.40	51739	11.19	52711	13.62
ZZZZZZ	78483	5.53	43831	7.08	70517	8.40	61982	11.18	57284	13.62
SW4369-ECC4339103068		5.53	57818	7.08	94138	8.40	73470	11.18	70722	13.63

IS 1 = Naphthalene-d8  
IS 2 = Acenaphthene-d10  
IS 3 = Phenanthrene-d10  
IS 4 = Chrysene-d12



## Semivolatile Internal Standard Area Summary

Page 2 of 2

**Job Number:** FA42152  
**Account:** CAPEGAA Cape Environmental Management Inc.  
**Project:** OB/OD Site I, OB Site II, Fort Bliss, TX

<b>Check Std:</b> SW4369-CC4339	<b>Injection Date:</b> 03/29/17
<b>Lab File ID:</b> W098384.D	<b>Injection Time:</b> 09:40
<b>Instrument ID:</b> GCMSW	<b>Method:</b> SW846 8270D BY SIM

Lab	IS 1		IS 2		IS 3		IS 4		IS 5	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT

**IS 5** = Perylene-d12

- (a) Initial Cal is: SW4339-ICC4339 W097287.D 02/13/17 20:18
- (b) Check Std Limit = -50 to + 100% of initial cal area.
- (c) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
- (d) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
- (e) Spike recoveries corrected for actual spike amount.

## Semivolatile Surrogate Recovery Summary

Page 1 of 1

**Job Number:** FA42152

**Account:** CAPEGAA Cape Environmental Management Inc.

**Project:** OB/OD Site I, OB Site II, Fort Bliss, TX

**Method:** SW846 8270D BY SIM

**Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
FA42152-1	W098391.D	55	58	53 <sup>a</sup>
FA42152-2	W098392.D	58	68	55 <sup>a</sup>
FA42152-3	W098393.D	53	65	54 <sup>a</sup>
FA42152-4	W098394.D	54	61	54 <sup>a</sup>
FA42152-5	W098395.D	57	65	53 <sup>a</sup>
FA42152-6	W098396.D	63	74	57 <sup>a</sup>
FA42152-7	W098397.D	59	71	63
FA42152-8	W098398.D	62	69	61
FA42152-9	W098401.D	62	70	61
OP64367-BS	W098390.D	67	79	65
OP64367-MB	W098389.D	71	78	61
OP64367-MS	W098399.D	69	82	64
OP64367-MSD	W098400.D	77	88	70

Surrogate Compounds	Recovery Limits
------------------------	--------------------

S1 = Nitrobenzene-d5	40-105%
S2 = 2-Fluorobiphenyl	43-107%
S3 = Terphenyl-d14	45-119%

(a) Outside DoD QSM control limits.

## Initial Calibration Summary

Page 1 of 2

Job Number: FA42152  
 Account: CAPEGAA Cape Environmental Management Inc.  
 Project: OB/OD Site I, OB Site II, Fort Bliss, TX

Sample: SW4339-ICC4339  
 Lab FileID: W097287.D

## Response Factor Report MSBNA01

Method : C:\msdchem\1\METHODS\simpahf.m (RTE Integrator)  
 Title : PAH's by 8270 SIM  
 Last Update : Tue Feb 14 08:14:18 2017  
 Response via : Initial Calibration

## Calibration Files

L1 =W097284.D L2 =W097285.D L3 =W097286.D L4 =W097287.D  
 L5 =W097288.D L6 =W097289.D L7 =W097290.D

Compound	L1	L2	L3	L4	L5	L6	L7	Avg	%RSD
1) I Naphthalene-d8	-----ISTD-----								
2) S Nitrobenzene-d5	0.312	0.302	0.291	0.293	0.282	0.277	0.243	0.286	7.78
3) P Naphthalene	1.183	1.094	0.963	0.982	0.927	0.867	0.776	0.970	14.00
4) P 2-Methylnaphthale	0.870	0.863	0.749	0.734	0.648	0.644	0.560	0.724	15.99
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9991									
Response Ratio = 0.00000 + 0.73819 *A + -0.01788 *A^2									
5) P 1-Methylnaphthale	0.783	0.743	0.665	0.656	0.587	0.589	0.535	0.651	13.65
6) I Acenaphthene-d10	-----ISTD-----								
7) S 2-Fluorobiphenyl	1.763	1.389	1.279	1.257	1.189	1.116	1.048	1.291	18.26
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9994									
Response Ratio = 0.00000 + 1.25819 *A + -0.02133 *A^2									
8) 1,1'-Biphenyl	1.923	1.415	1.372	1.332	1.287	1.234	1.164	1.390	17.97
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9998									
Response Ratio = 0.00000 + 1.35063 *A + -0.01882 *A^2									
9) P Acenaphthylene	2.824	2.272	2.029	1.937	1.761	1.729	1.570	2.017	20.94
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9994									
Response Ratio = 0.00000 + 1.94331 *A + -0.03769 *A^2									
10) P Acenaphthene	1.490	1.251	1.165	1.112	0.991	0.991	0.940	1.134	16.90
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9984									
Response Ratio = 0.00000 + 1.12796 *A + -0.02023 *A^2									
11) Dibenzofuran	2.111	1.823	1.684	1.521	1.423	1.318	1.260	1.591	19.03
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9984									
Response Ratio = 0.00000 + 1.50991 *A + -0.02563 *A^2									
12) P Fluorene	1.807	1.578	1.473	1.349	1.190	1.207	1.108	1.387	17.91
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9987									
Response Ratio = 0.00000 + 1.33192 *A + -0.02267 *A^2									
13) I Phenanthrene-d10	-----ISTD-----								
14) S 2,4,6-Tribromophe	0.080	0.074	0.071	0.076	0.077	0.071	0.067	0.074	5.86
15) P Pentachlorophenol	0.054	0.068	0.082	0.104	0.112	0.112	0.123	0.093	27.61
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9992									
Response Ratio = 0.00000 + 0.09919 *A + 0.00095 *A^2									
16) P Phenanthrene	1.450	1.217	1.128	1.109	1.036	1.026	0.954	1.132	14.48
17) P Anthracene	1.547	1.366	1.193	1.261	1.149	1.111	1.047	1.239	13.79
18) Carbazole	1.428	1.328	1.235	1.225	1.094	1.049	0.966	1.189	13.64
19) P Fluoranthene	1.770	1.561	1.363	1.296	1.169	1.136	1.097	1.342	18.41
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9988									

# Initial Calibration Summary

Page 2 of 2

**Job Number:** FA42152  
**Account:** CAPEGAA Cape Environmental Management Inc.  
**Project:** OB/OD Site I, OB Site II, Fort Bliss, TX

**Sample:** SW4339-ICC4339  
**Lab FileID:** W097287.D

$$\text{Response Ratio} = 0.00000 + 1.25146 *A + -0.01586 *A^2$$

20) I	Chrysene-d12									
21)P	Pyrene	2.219	1.957	1.764	1.719	1.627	1.594	1.492	1.767	14.01
22)S	Terphenyl-d14	1.011	0.901	0.814	0.824	0.745	0.772	0.723	0.827	12.07
23)P	Benzo[a]anthracen	1.845	1.614	1.558	1.592	1.449	1.469	1.360	1.555	10.02
24)P	Chrysene	1.567	1.406	1.398	1.374	1.330	1.347	1.247	1.381	7.08
25) I	Perylene-d12									
26)P	Benzo[b]fluoranth	1.794	1.670	1.554	1.454	1.387	1.320	1.213	1.485	13.65
27)P	Benzo[k]fluoranth	1.794	1.611	1.415	1.385	1.276	1.334	1.206	1.431	14.28
28)P	Benzo[a]pyrene	1.630	1.595	1.408	1.413	1.330	1.351	1.195	1.417	10.71
29)P	Indeno[1,2,3-cd]p	1.314	1.218	1.140	1.117	1.174	1.147	1.040	1.164	7.36
30)P	Dibenz[a,h]anthra	1.287	1.159	1.072	1.082	1.071	1.100	1.007	1.111	8.05
31)P	Benzo[g,h,i]peryl	1.599	1.359	1.289	1.250	1.293	1.284	1.142	1.317	10.69

(#) = Out of Range

simpahf.m

Tue Feb 14 15:58:37 2017

## Initial Calibration Verification

Page 1 of 2

Job Number: FA42152  
 Account: CAPEGAA Cape Environmental Management Inc.  
 Project: OB/OD Site I, OB Site II, Fort Bliss, TX

Sample: SW4339-ICV4339  
 Lab FileID: W097291.D

## Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\SW4338\W097291.D Vial: 93  
 Acq On : 13 Feb 2017 9:49 pm Operator: fouads  
 Sample : icv4339-4 Inst : MSBNA01  
 Misc : op63755,sw4339,14.9,,,1,1,soil Multiplr: 1.00  
 MS Integration Params: RTEINT.P

Method : C:\msdchem\1\METHODS\simpahf.m (RTE Integrator)  
 Title : PAH's by 8270 SIM  
 Last Update : Tue Feb 14 08:14:18 2017  
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev (min)	R.T.
1 I	Naphthalene-d8	4.000	4.000	0.0	105	0.00	5.59
2 S	Nitrobenzene-d5		-----NA-----				
3 P	Naphthalene	10.000	8.761	12.4	91	0.00	5.61
	----- Amount	Calc.	%Drift	-----			
4 P	2-Methylnaphthalene	10.000	8.453	15.5	84	0.00	6.21
	----- Amount	Calc.	%Drift	-----			
5 P	1-Methylnaphthalene	10.000	9.108	8.9	95	-0.02	6.30
6 I	Acenaphthene-d10	4.000	4.000	0.0	97	0.00	7.14
	----- Amount	Calc.	%Drift	-----			
7 S	2-Fluorobiphenyl		-----NA-----				
8	1,1'-Biphenyl		-----NA-----				
9 P	Acenaphthylene	10.000	9.630	3.7	90	0.00	7.01
10 P	Acenaphthene	10.000	9.223	7.8	87	0.00	7.16
11	Dibenzofuran	10.000	10.202	-2.0	94	0.00	7.32
12 P	Fluorene	10.000	9.649	3.5	89	0.00	7.63
	----- Amount	Calc.	%Drift	-----			
13 I	Phenanthrene-d10	4.000	4.000	0.0	95	0.00	8.46
14 S	2,4,6-Tribromophenol		-----NA-----				
	----- Amount	Calc.	%Drift	-----			
15 P	Pentachlorophenol	20.000	17.358	13.2	66	0.00	8.29
	----- Amount	Calc.	%Drift	-----			
16 P	Phenanthrene	10.000	8.720	12.8	84	0.00	8.48
17 P	Anthracene	5.000	4.218	15.6	78	0.00	8.52
18	Carbazole	5.000	4.526	9.5	83	0.00	8.67
	----- Amount	Calc.	%Drift	-----			
19 P	Fluoranthene	10.000	9.620	3.8	85	-0.02	9.56
	----- Amount	Calc.	%Drift	-----			
20 I	Chrysene-d12	4.000	4.000	0.0	87	-0.01	11.27
21 P	Pyrene	10.000	8.904	11.0	80	0.02	9.78
22 S	Terphenyl-d14		-----NA-----				
23 P	Benzo[a]anthracene	5.000	4.638	7.2	79	0.00	11.25

# Initial Calibration Verification

Page 2 of 2

**Job Number:** FA42152  
**Account:** CAPEGAA Cape Environmental Management Inc.  
**Project:** OB/OD Site I, OB Site II, Fort Bliss, TX

**Sample:** SW4339-ICV4339  
**Lab FileID:** W097291.D

24	P	Chrysene	5.000	4.798	4.0	84	-0.01	11.31
25	I	Perylene-d12	4.000	4.000	0.0	91	-0.01	13.72
26	P	Benzo[b]fluoranthene	5.000	4.422	11.6	82	0.00	13.02
27	P	Benzo[k]fluoranthene	5.000	4.266	14.7	80	-0.01	13.07
28	P	Benzo[a]pyrene	5.000	4.403	11.9	80	-0.02	13.61
29	P	Indeno[1,2,3-cd]pyrene	5.000	4.660	6.8	88	0.00	15.89
30	P	Dibenz[a,h]anthracene	5.000	4.372	12.6	82	-0.02	15.95
31	P	Benzo[g,h,i]perylene	5.000	4.283	14.3	82	0.00	16.33

(#) = Out of Range  
W097287.D simpahf.m

SPCC's out = 0 CCC's out = 0  
Tue Feb 14 16:28:27 2017

## Continuing Calibration Summary

Page 1 of 2

**Job Number:** FA42152  
**Account:** CAPEGAA Cape Environmental Management Inc.  
**Project:** OB/OD Site I, OB Site II, Fort Bliss, TX

**Sample:** SW4369-CC4339  
**Lab FileID:** W098384.D

## Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\SW4369\W098384.D Vial: 2  
 Acq On : 29 Mar 2017 9:40 am Operator: fouads  
 Sample : cc4339-4 Inst : MSBNA01  
 Misc : op64229,sw4369,15.0,,,1,1,soil Multiplr: 1.00  
 MS Integration Params: RTEINT.P

Method : C:\msdchem\1\METHODS\simpahf.m (RTE Integrator)  
 Title : PAH's by 8270 SIM  
 Last Update : Thu Mar 02 08:24:54 2017  
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev (min)	R.T.
1 I	Naphthalene-d8	1.000	1.000	0.0	83	0.00	5.53
2 S	Nitrobenzene-d5	0.286	0.254	11.2	72	0.00	4.92
3 P	Naphthalene	0.970	0.831	14.3	70	0.00	5.55
	----- Amount Calc. %Drift -----						
4 P	2-Methylnaphthalene	10.000	9.154	8.5	72	0.00	6.16
	----- AvgRF CCRF %Dev -----						
5 P	1-Methylnaphthalene	0.651	0.561	13.8	71	0.00	6.24
6 I	Acenaphthene-d10	1.000	1.000	0.0	79	0.00	7.09
	----- Amount Calc. %Drift -----						
7 S	2-Fluorobiphenyl	10.000	9.477	5.2	72	-0.02	6.47
8	1,1'-Biphenyl	10.000	9.074	9.3	70	-0.02	6.56
9 P	Acenaphthylene	10.000	9.410	5.9	71	-0.01	6.95
10 P	Acenaphthene	10.000	9.205	7.9	71	-0.01	7.11
11	Dibenzofuran	10.000	9.324	6.8	70	0.00	7.27
12 P	Fluorene	10.000	9.625	3.8	72	-0.01	7.57
	----- AvgRF CCRF %Dev -----						
13 I	Phenanthrene-d10	1.000	1.000	0.0	82	0.00	8.41
14 S	2,4,6-Tribromophenol	0.074	0.069	6.8	75	0.00	7.79
	----- Amount Calc. %Drift -----						
15 P	Pentachlorophenol	25.000	23.797	4.8	79	0.00	8.24
	----- AvgRF CCRF %Dev -----						
16 P	Phenanthrene	1.132	1.021	9.8	75	0.00	8.43
17 P	Anthracene	1.239	1.103	11.0	72	0.00	8.47
18	Carbazole	1.189	1.100	7.5	74	0.00	8.62
	----- Amount Calc. %Drift -----						
19 P	Fluoranthene	10.000	10.104	-1.0	77	-0.01	9.50
	----- AvgRF CCRF %Dev -----						
20 I	Chrysene-d12	1.000	1.000	0.0	79	0.00	11.19
21 P	Pyrene	1.767	1.619	8.4	74	0.00	9.72
22 S	Terphenyl-d14	0.827	0.753	8.9	72	0.00	9.88
23 P	Benzo[a]anthracene	1.555	1.470	5.5	73	0.00	11.17



## Continuing Calibration Summary

Page 2 of 2

**Job Number:** FA42152

**Sample:** SW4369-CC4339

**Account:** CAPEGAA Cape Environmental Management Inc.

**Lab FileID:** W098384.D

**Project:** OB/OD Site I, OB Site II, Fort Bliss, TX

24	P	Chrysene	1.381	1.321	4.3	76	0.00	11.23
25	I	Perylene-d12	1.000	1.000	0.0	78	0.00	13.64
26	P	Benzo[b]fluoranthene	1.485	1.346	9.4	72	0.00	12.93
27	P	Benzo[k]fluoranthene	1.431	1.315	8.1	74	0.01	12.99
28	P	Benzo[a]pyrene	1.417	1.292	8.8	71	0.00	13.53
29	P	Indeno[1,2,3-cd]pyrene	1.164	1.012	13.1	71	0.03	15.81
30	P	Dibenz[a,h]anthracene	1.111	0.967	13.0	70	0.02	15.86
31	P	Benzo[g,h,i]perylene	1.317	1.118	15.1	70	0.03	16.25

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

W097287.D simpahf.m

Thu Mar 30 16:43:41 2017

## Continuing Calibration Summary

Page 1 of 2

**Job Number:** FA42152  
**Account:** CAPEGAA Cape Environmental Management Inc.  
**Project:** OB/OD Site I, OB Site II, Fort Bliss, TX

**Sample:** SW4369-ECC4339  
**Lab FileID:** W098415.D

## Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\SW4369\W098415.D Vial: 2  
 Acq On : 29 Mar 2017 9:32 pm Operator: fouads  
 Sample : ecc4339-4 Inst : MSBNA01  
 Misc : op64357,sw4369,30.3,,,1,2,soil Multiplr: 1.00  
 MS Integration Params: RTEINT.P

Method : C:\msdchem\1\METHODS\simpahf.m (RTE Integrator)  
 Title : PAH's by 8270 SIM  
 Last Update : Thu Mar 02 08:24:54 2017  
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 50% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev (min)	R.T.
1 I	Naphthalene-d8	1.000	1.000	0.0	77	0.00	5.53
2 S	Nitrobenzene-d5	0.286	0.276	3.5	72	-0.02	4.92
3 P	Naphthalene	0.970	0.849	12.5	66	0.00	5.55
----- Amount Calc. %Drift -----							
4 P	2-Methylnaphthalene	10.000	9.305	7.0	68	-0.01	6.15
----- AvgRF CCRF %Dev -----							
5 P	1-Methylnaphthalene	0.651	0.586	10.0	69	-0.01	6.24
6 I	Acenaphthene-d10	1.000	1.000	0.0	72	-0.01	7.08
----- Amount Calc. %Drift -----							
7 S	2-Fluorobiphenyl	10.000	9.428	5.7	66	-0.02	6.47
8	1,1'-Biphenyl	10.000	9.297	7.0	66	-0.02	6.57
9 P	Acenaphthylene	10.000	9.389	6.1	65	-0.01	6.95
10 P	Acenaphthene	10.000	9.198	8.0	65	-0.01	7.11
11	Dibenzofuran	10.000	9.745	2.6	67	0.00	7.27
12 P	Fluorene	10.000	9.940	0.6	68	-0.01	7.57
----- AvgRF CCRF %Dev -----							
13 I	Phenanthrene-d10	1.000	1.000	0.0	74	-0.01	8.40
14 S	2,4,6-Tribromophenol	0.074	0.074	0.0	72	-0.01	7.79
----- Amount Calc. %Drift -----							
15 P	Pentachlorophenol	25.000	23.312	6.8	70	-0.01	8.24
----- AvgRF CCRF %Dev -----							
16 P	Phenanthrene	1.132	1.003	11.4	67	-0.01	8.42
17 P	Anthracene	1.239	1.110	10.4	65	0.00	8.47
18	Carbazole	1.189	1.076	9.5	65	0.00	8.61
----- Amount Calc. %Drift -----							
19 P	Fluoranthene	10.000	9.581	4.2	66	-0.02	9.49
----- AvgRF CCRF %Dev -----							
20 I	Chrysene-d12	1.000	1.000	0.0	73	-0.01	11.18
21 P	Pyrene	1.767	1.496	15.3	64	0.00	9.72
22 S	Terphenyl-d14	0.827	0.733	11.4	65	0.00	9.88
23 P	Benzo[a]anthracene	1.555	1.439	7.5	66	-0.01	11.17

# Continuing Calibration Summary

Page 2 of 2

**Job Number:** FA42152  
**Account:** CAPEGAA Cape Environmental Management Inc.  
**Project:** OB/OD Site I, OB Site II, Fort Bliss, TX

**Sample:** SW4369-ECC4339  
**Lab FileID:** W098415.D

24	P	Chrysene	1.381	1.313	4.9	70	-0.01	11.22
25	I	Perylene-d12	1.000	1.000	0.0	78	0.00	13.63
26	P	Benzo[b]fluoranthene	1.485	1.340	9.8	71	0.00	12.92
27	P	Benzo[k]fluoranthene	1.431	1.327	7.3	74	0.00	12.98
28	P	Benzo[a]pyrene	1.417	1.292	8.8	71	0.00	13.52
29	P	Indeno[1,2,3-cd]pyrene	1.164	1.001	14.0	69	0.01	15.80
30	P	Dibenz[a,h]anthracene	1.111	0.956	14.0	69	0.00	15.85
31	P	Benzo[g,h,i]perylene	1.317	1.045	20.7	65	0.02	16.25

(#) = Out of Range  
W097287.D simpahf.m

SPCC's out = 0 CCC's out = 0  
Thu Mar 30 16:47:07 2017

GC/MS Semi-volatiles

Raw Data

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\SW4369\  
 Data File : W098391.D  
 Acq On : 29 Mar 2017 12:20 pm  
 Operator : fouads  
 Sample : fa42152-1 Inst : MSBNA01  
 Misc : op64367,sw4369,15.0,,,1,1,soil  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 29 14:44:19 2017  
 Quant Method : C:\msdchem\1\METHODS\simpahf.m  
 Quant Title : PAH's by 8270 SIM  
 QLast Update : Thu Mar 02 08:24:54 2017  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	5.534	136	100777	4.00	ppm	0.00
6) Acenaphthene-d10	7.080	164	58464	4.00	ppm	-0.01
13) Phenanthrene-d10	8.400	188	86952	4.00	ppm	-0.01
20) Chrysene-d12	11.188	240	76248	4.00	ppm	-0.01
25) Perylene-d12	13.627	264	71885	4.00	ppm	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	4.921	82	39509	5.49	ppm	0.00
Spiked Amount 10.000	Range 40 - 105		Recovery =	54.90%		
7) 2-Fluorobiphenyl	6.473	172	104634	5.83	ppm	-0.02
Spiked Amount 10.000	Range 43 - 107		Recovery =	58.30%		
14) 2,4,6-Tribromophenol	7.787	330	21371	13.32	ppm	-0.01
Spiked Amount 20.000	Range 42 - 108		Recovery =	66.60%		
22) Terphenyl-d14	9.875	244	83487	5.30	ppm	0.00
Spiked Amount 10.000	Range 45 - 119		Recovery =	53.00%		
Target Compounds						
16) Phenanthrene	8.424	178	1397	0.06	ppm	95
19) Fluoranthene	9.496	202	3057	0.11	ppm	97
21) Pyrene	9.722	202	2491	0.07	ppm	96
24) Chrysene	11.223	228	1190	0.05	ppm	87
26) Benzo[b]fluoranthene	12.929	252	1761	0.07	ppm	85
28) Benzo[a]pyrene	13.519	252	1003	0.04	ppm	84
29) Indeno[1,2,3-cd]pyrene	15.801	276	821	0.04	ppm	80

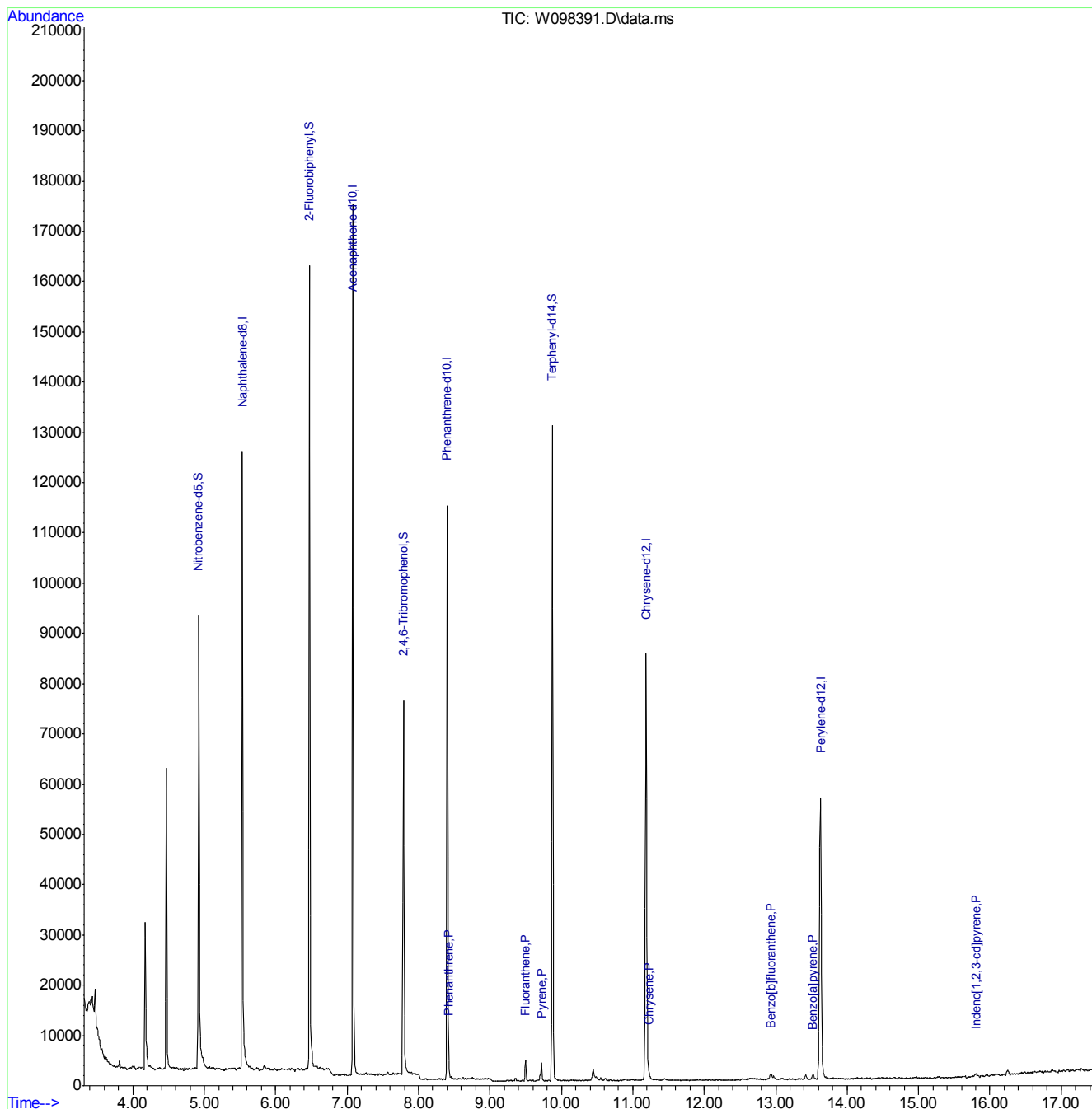
(#) = qualifier out of range (m) = manual integration (+) = signals summed

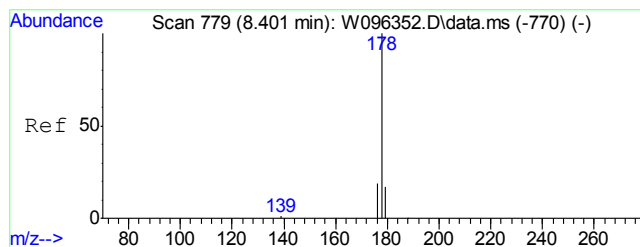
## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\SW4369\  
Data File : W098391.D  
Acq On : 29 Mar 2017 12:20 pm  
Operator : fouads  
Sample : fa42152-1  
Misc : op64367,sw4369,15.0,,,1,1,soil  
ALS Vial : 9 Sample Multiplier: 1

Inst : MSBNA01

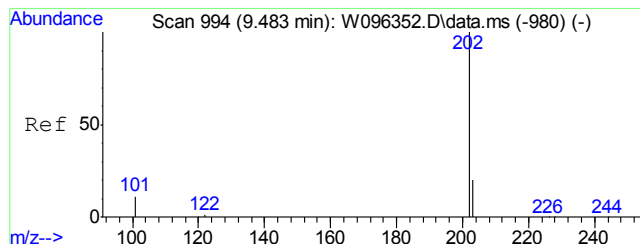
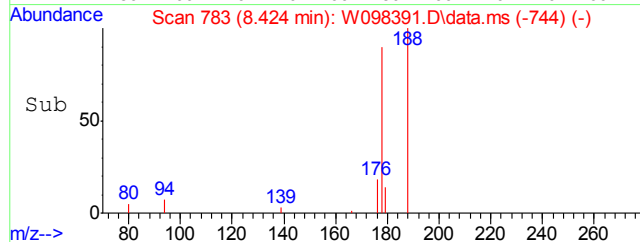
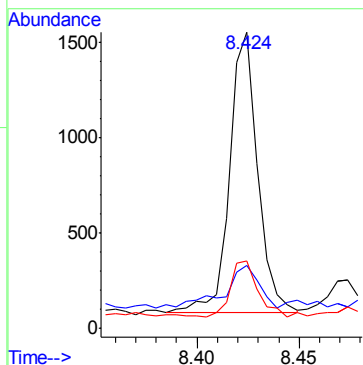
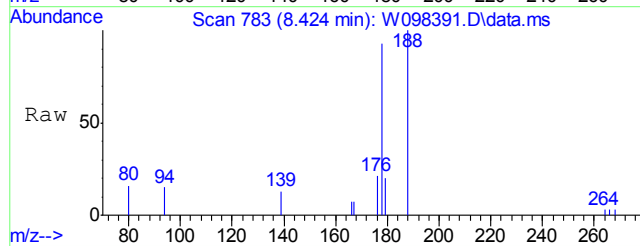
Quant Time: Mar 29 14:44:19 2017  
Quant Method : C:\msdchem\1\METHODS\simpahf.m  
Quant Title : PAH's by 8270 SIM  
QLast Update : Thu Mar 02 08:24:54 2017  
Response via : Initial Calibration





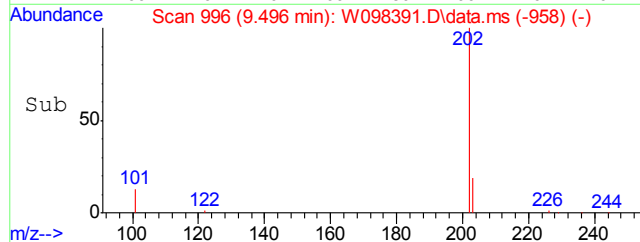
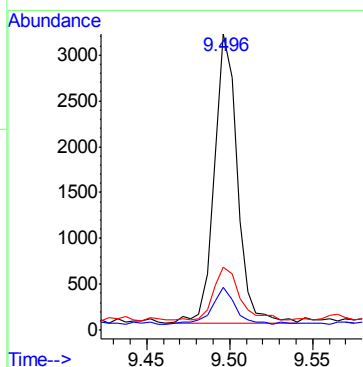
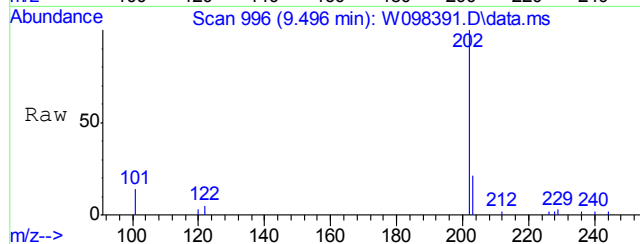
#16  
Phenanthrene  
Concen: 0.06 ppm  
RT: 8.424 min Scan# 783  
Delta R.T. -0.010 min  
Lab File: W098391.D  
Acq: 29 Mar 17 12:20 pm

Tgt Ion:178 Resp: 1397  
Ion Ratio Lower Upper  
178 100  
179 13.2 0.0 47.5  
176 18.9 0.0 49.1

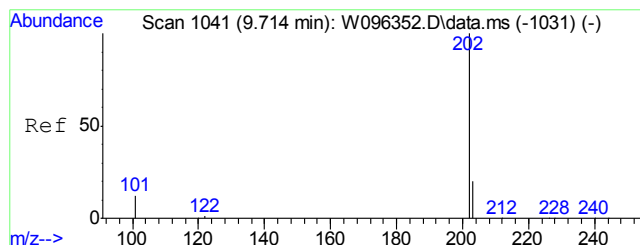


#19  
Fluoranthene  
Concen: 0.11 ppm  
RT: 9.496 min Scan# 996  
Delta R.T. -0.013 min  
Lab File: W098391.D  
Acq: 29 Mar 17 12:20 pm

Tgt Ion:202 Resp: 3057  
Ion Ratio Lower Upper  
202 100  
101 12.7 0.0 43.2  
203 18.3 0.0 50.3

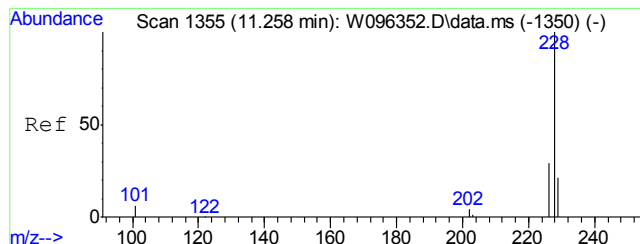
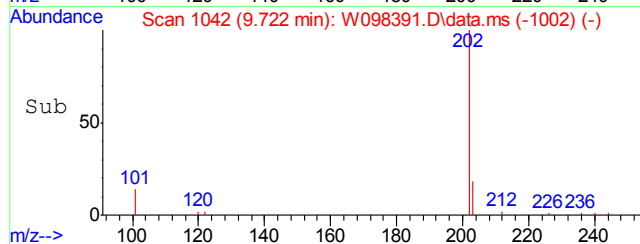
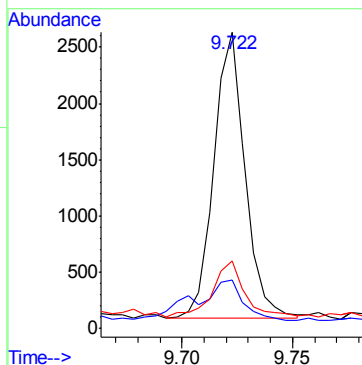
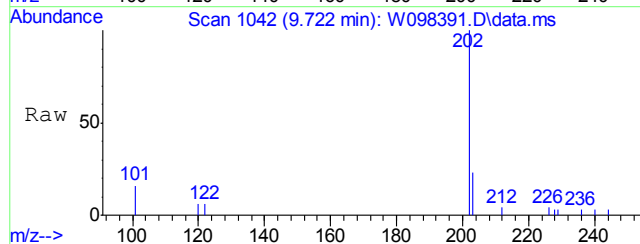






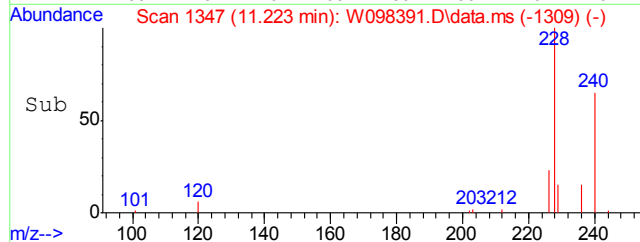
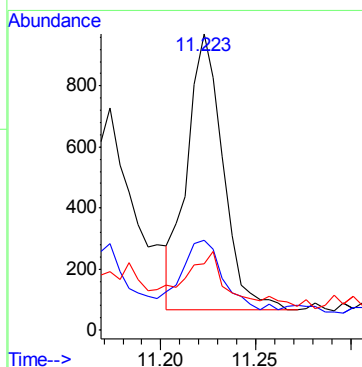
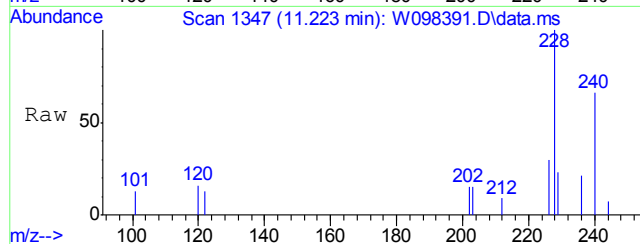
#21  
Pyrene  
Concen: 0.07 ppm  
RT: 9.722 min Scan# 1042  
Delta R.T. -0.004 min  
Lab File: W098391.D  
Acq: 29 Mar 17 12:20 pm

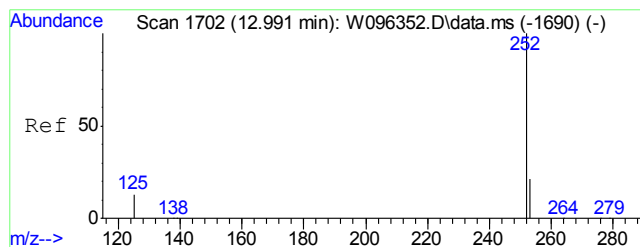
Tgt Ion	Ratio	Lower	Upper
202	100		
101	12.4	0.0	45.4
203	19.4	0.0	50.4



#24  
Chrysene  
Concen: 0.05 ppm  
RT: 11.223 min Scan# 1347  
Delta R.T. -0.015 min  
Lab File: W098391.D  
Acq: 29 Mar 17 12:20 pm

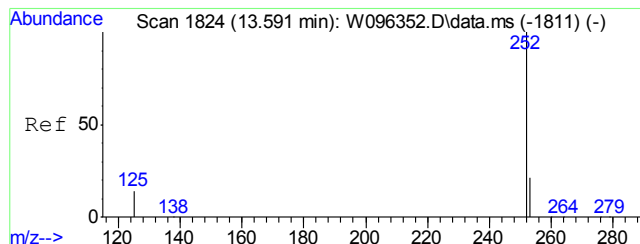
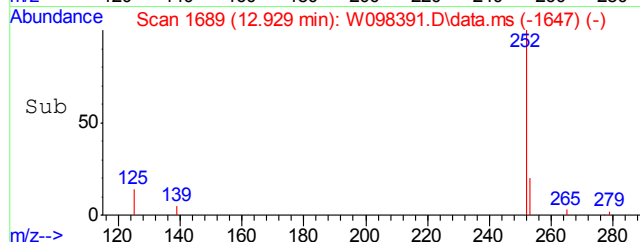
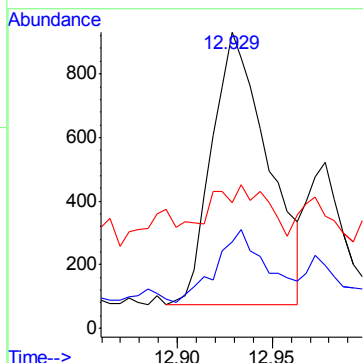
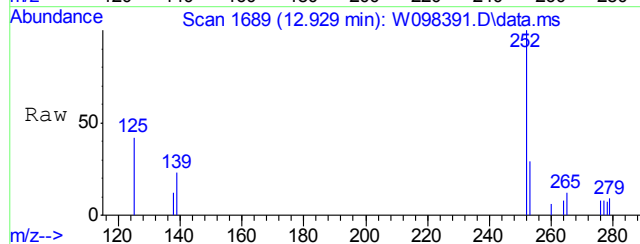
Tgt Ion	Ratio	Lower	Upper
228	100		
226	23.6	0.0	58.8
229	13.4	0.0	51.2





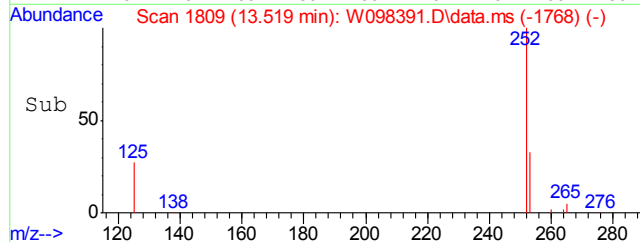
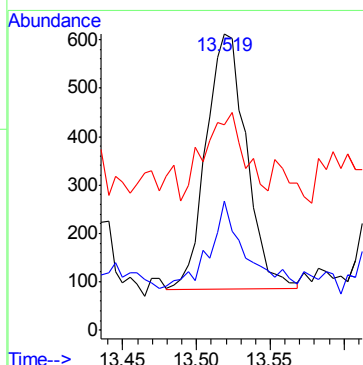
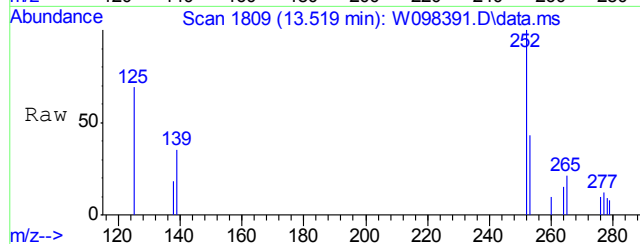
#26  
Benzo[b]fluoranthene  
Concen: 0.07 ppm  
RT: 12.929 min Scan# 1689  
Delta R.T. 0.005 min  
Lab File: W098391.D  
Acq: 29 Mar 17 12:20 pm

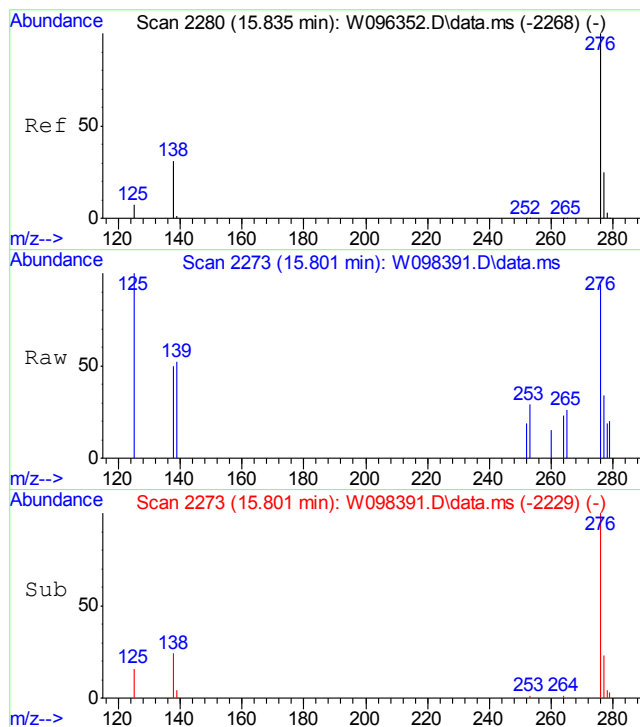
Tgt Ion	Ratio	Lower	Upper
252	100		
253	20.8	0.0	53.3
125	4.0	0.0	46.8



#28  
Benzo[a]pyrene  
Concen: 0.04 ppm  
RT: 13.519 min Scan# 1809  
Delta R.T. 0.001 min  
Lab File: W098391.D  
Acq: 29 Mar 17 12:20 pm

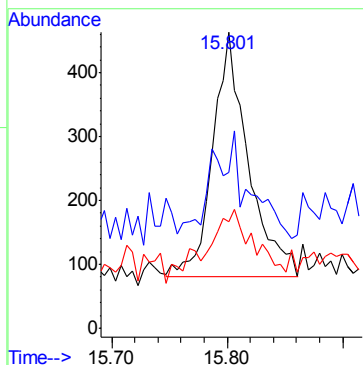
Tgt Ion	Ratio	Lower	Upper
252	100		
253	33.2	0.0	53.3
125	21.8	0.0	47.6





#29  
 Indeno[1,2,3-cd]pyrene  
 Concen: 0.04 ppm  
 RT: 15.801 min Scan# 2273  
 Delta R.T. 0.017 min  
 Lab File: W098391.D  
 Acq: 29 Mar 17 12:20 pm

Tgt Ion	Ratio	Lower	Upper
276	100		
138	18.0	6.4	66.4
277	22.9	0.0	54.9



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\SW4369\  
 Data File : W098392.D  
 Acq On : 29 Mar 2017 12:43 pm  
 Operator : fouads  
 Sample : fa42152-2 Inst : MSBNA01  
 Misc : op64367,sw4369,15.2,,,1,1,soil  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Mar 29 14:45:05 2017  
 Quant Method : C:\msdchem\1\METHODS\simpahf.m  
 Quant Title : PAH's by 8270 SIM  
 QLast Update : Thu Mar 02 08:24:54 2017  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	5.534	136	95770	4.00	ppm	0.00
6) Acenaphthene-d10	7.081	164	50942	4.00	ppm	-0.01
13) Phenanthrene-d10	8.400	188	83458	4.00	ppm	-0.01
20) Chrysene-d12	11.184	240	72003	4.00	ppm	-0.01
25) Perylene-d12	13.625	264	67222	4.00	ppm	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	4.921	82	39398	5.76	ppm	0.00
Spiked Amount 10.000	Range 40 - 105		Recovery =	57.60%		
7) 2-Fluorobiphenyl	6.473	172	106044	6.81	ppm	-0.02
Spiked Amount 10.000	Range 43 - 107		Recovery =	68.10%		
14) 2,4,6-Tribromophenol	7.787	330	21221	13.78	ppm	-0.01
Spiked Amount 20.000	Range 42 - 108		Recovery =	68.90%		
22) Terphenyl-d14	9.876	244	81998	5.51	ppm	0.00
Spiked Amount 10.000	Range 45 - 119		Recovery =	55.10%		
Target Compounds						
19) Fluoranthene	9.497	202	2083	0.08	ppm	96
21) Pyrene	9.723	202	1668	0.05	ppm	98
26) Benzo[b]fluoranthene	12.932	252	1343	0.05	ppm	88

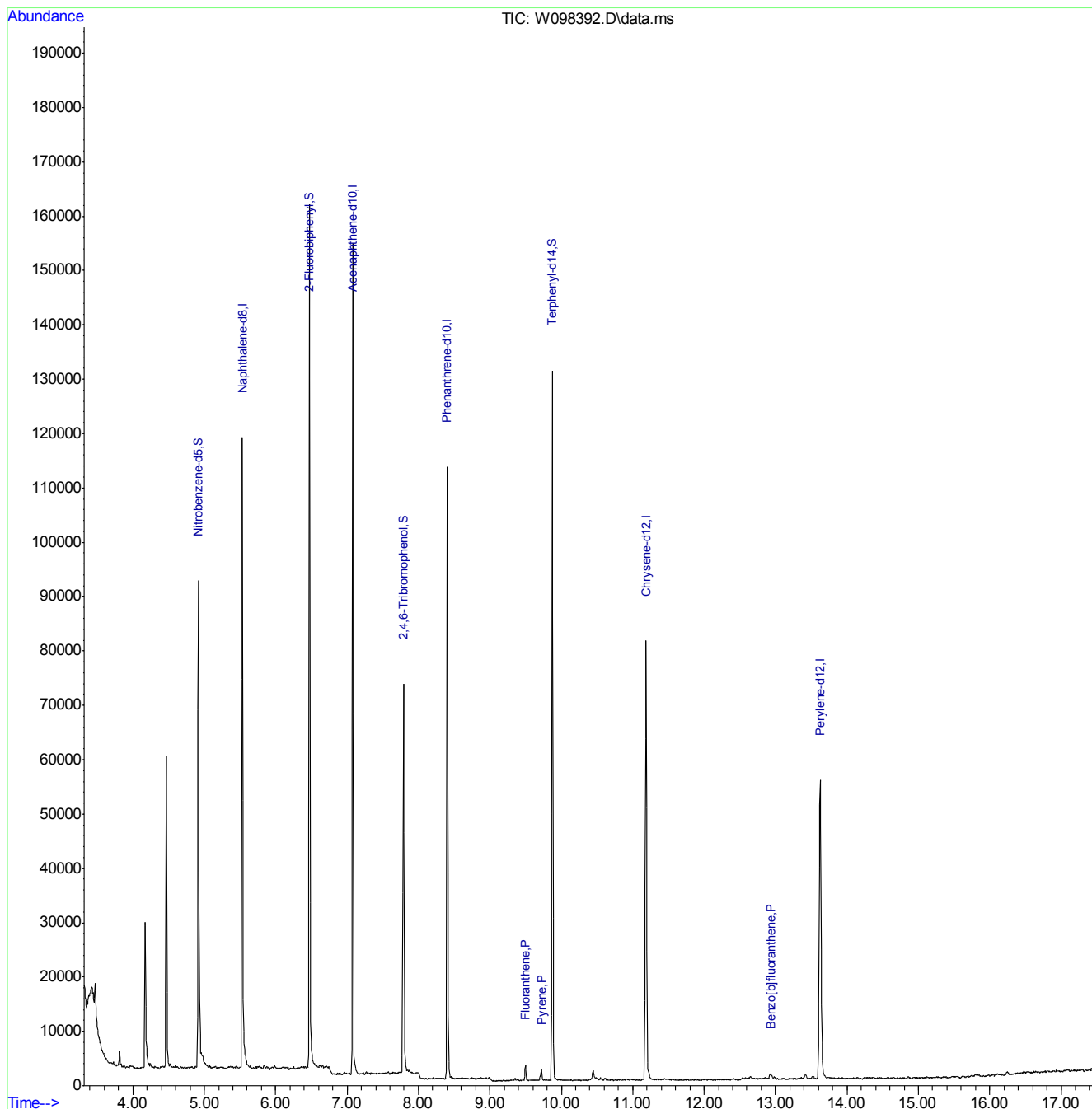
(#) = qualifier out of range (m) = manual integration (+) = signals summed

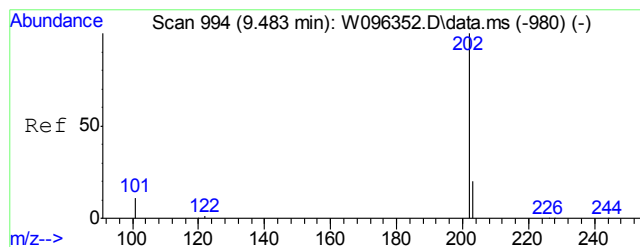
## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\SW4369\  
Data File : W098392.D  
Acq On : 29 Mar 2017 12:43 pm  
Operator : fouads  
Sample : fa42152-2  
Misc : op64367,sw4369,15.2,,,1,1,soil  
ALS Vial : 10 Sample Multiplier: 1

Inst : MSBNA01

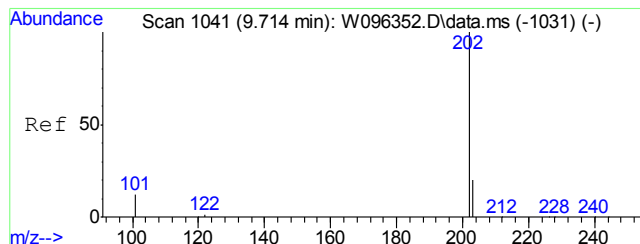
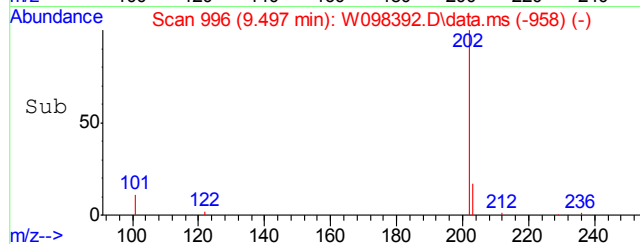
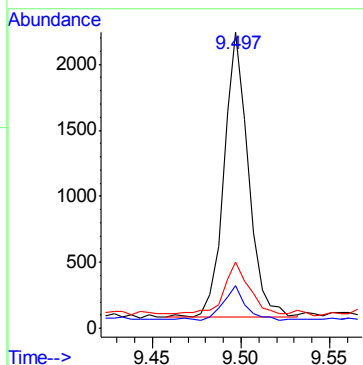
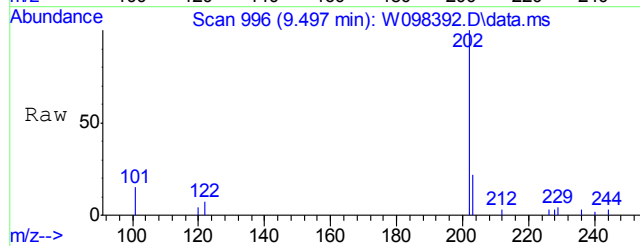
Quant Time: Mar 29 14:45:05 2017  
Quant Method : C:\msdchem\1\METHODS\simpahf.m  
Quant Title : PAH's by 8270 SIM  
QLast Update : Thu Mar 02 08:24:54 2017  
Response via : Initial Calibration





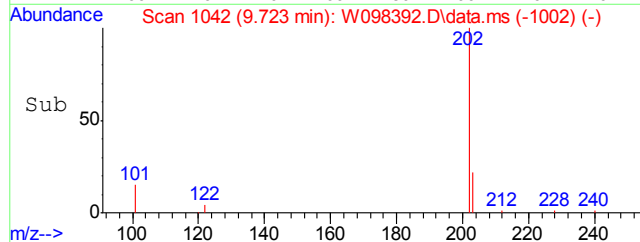
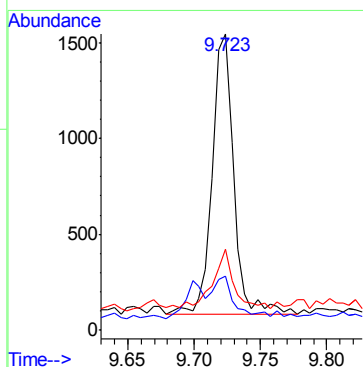
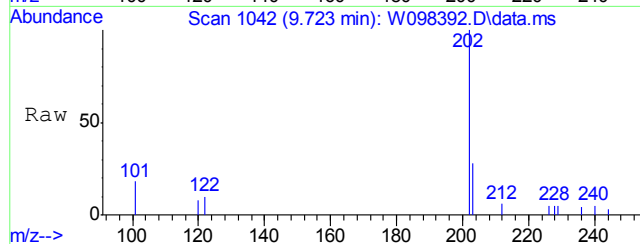
#19  
Fluoranthene  
Concen: 0.08 ppm  
RT: 9.497 min Scan# 996  
Delta R.T. -0.012 min  
Lab File: W098392.D  
Acq: 29 Mar 17 12:43 pm

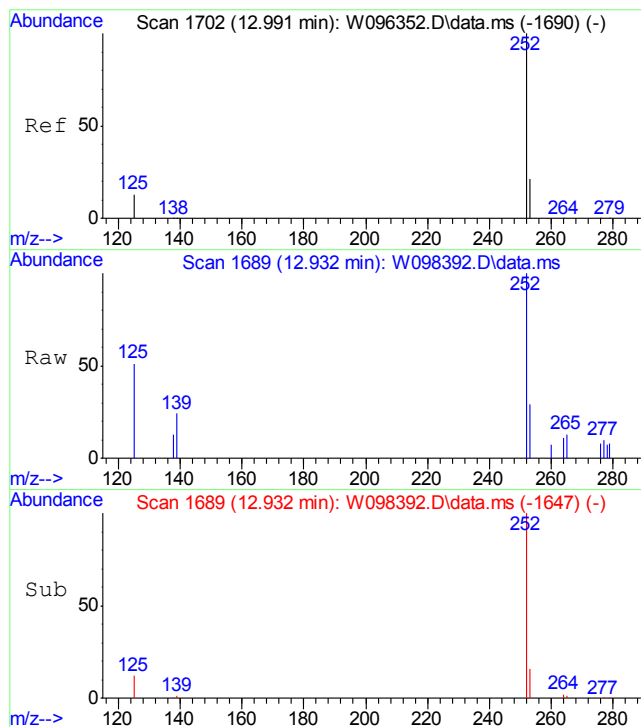
Tgt Ion	Ratio	Lower	Upper
202	100		
101	12.2	0.0	43.2
203	17.7	0.0	50.3



#21  
Pyrene  
Concen: 0.05 ppm  
RT: 9.723 min Scan# 1042  
Delta R.T. -0.003 min  
Lab File: W098392.D  
Acq: 29 Mar 17 12:43 pm

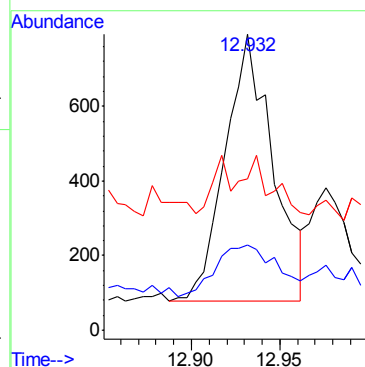
Tgt Ion	Ratio	Lower	Upper
202	100		
101	14.7	0.0	45.4
203	19.5	0.0	50.4





#26  
Benzo[b]fluoranthene  
Concen: 0.05 ppm  
RT: 12.932 min Scan# 1689  
Delta R.T. 0.008 min  
Lab File: W098392.D  
Acq: 29 Mar 17 12:43 pm

Tgt Ion:	252	Resp:	1343
Ion Ratio	Lower	Upper	
252	100		
253	17.2	0.0	53.3
125	12.2	0.0	46.8



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\SW4369\  
 Data File : W098393.D  
 Acq On : 29 Mar 2017 1:06 pm  
 Operator : fouads  
 Sample : fa42152-3 Inst : MSBNA01  
 Misc : op64367,sw4369,15.1,,,1,1,soil  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Mar 29 14:45:56 2017  
 Quant Method : C:\msdchem\1\METHODS\simpahf.m  
 Quant Title : PAH's by 8270 SIM  
 QLast Update : Thu Mar 02 08:24:54 2017  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	5.535	136	97837	4.00	ppm	0.00
6) Acenaphthene-d10	7.080	164	50701	4.00	ppm	-0.01
13) Phenanthrene-d10	8.401	188	81544	4.00	ppm	-0.01
20) Chrysene-d12	11.183	240	72799	4.00	ppm	-0.02
25) Perylene-d12	13.626	264	64910	4.00	ppm	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	4.922	82	37200	5.33	ppm	0.00
Spiked Amount 10.000	Range 40 - 105		Recovery =	53.30%		
7) 2-Fluorobiphenyl	6.474	172	101262	6.53	ppm	-0.02
Spiked Amount 10.000	Range 43 - 107		Recovery =	65.30%		
14) 2,4,6-Tribromophenol	7.786	330	20289	13.48	ppm	-0.01
Spiked Amount 20.000	Range 42 - 108		Recovery =	67.40%		
22) Terphenyl-d14	9.875	244	81331	5.40	ppm	0.00
Spiked Amount 10.000	Range 45 - 119		Recovery =	54.00%		
Target Compounds						
19) Fluoranthene	9.496	202	1646	0.06	ppm	95
21) Pyrene	9.722	202	1405	0.04	ppm	94
26) Benzo[b]fluoranthene	12.928	252	1378	0.06	ppm	95
27) Benzo[k]fluoranthene	12.928	252	1378	0.06	ppm	95
29) Indeno[1,2,3-cd]pyrene	15.810	276	695	0.04	ppm	68

(#) = qualifier out of range (m) = manual integration (+) = signals summed

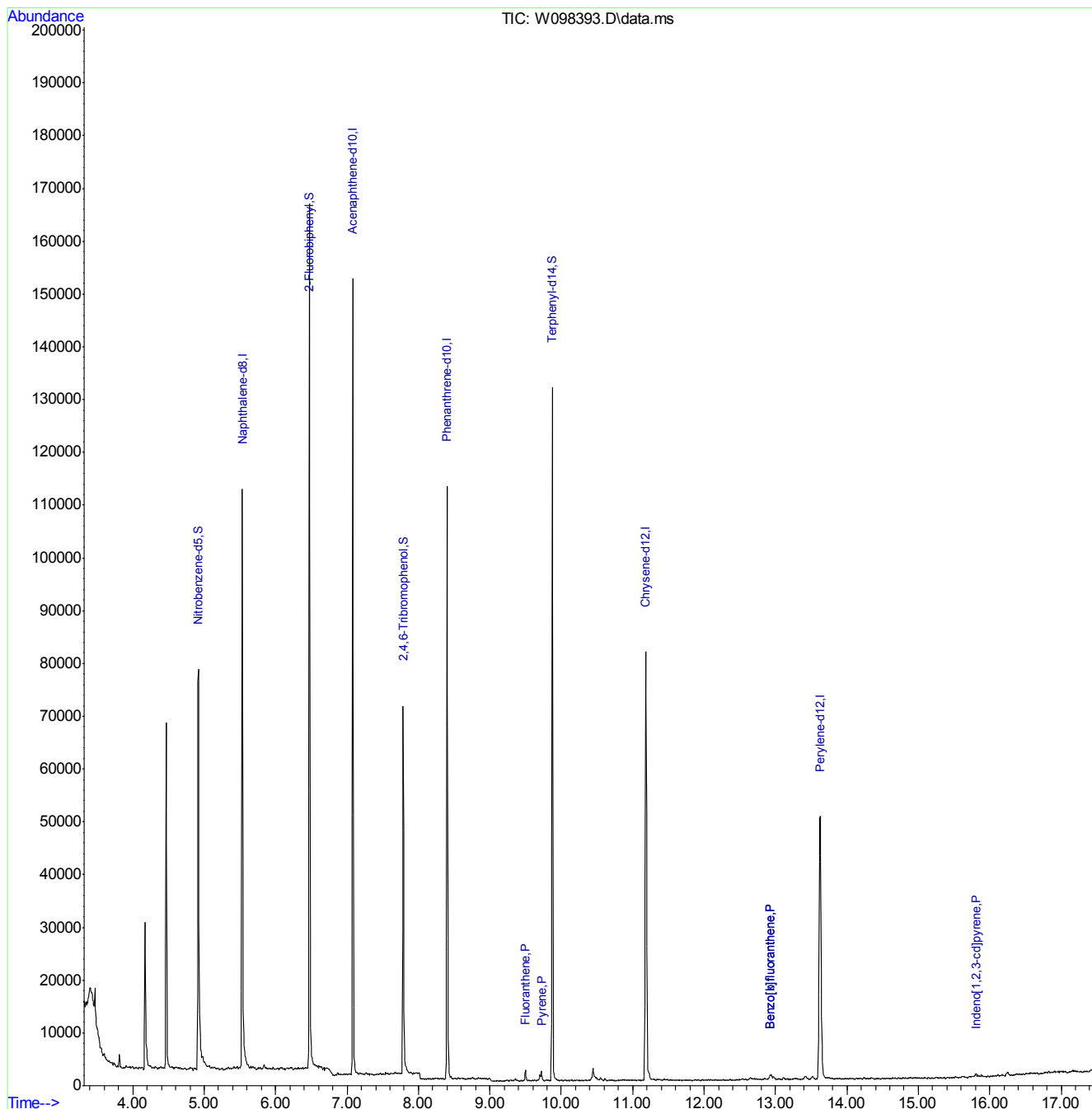


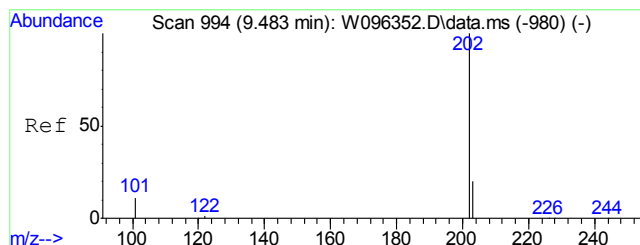
## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\SW4369\  
Data File : W098393.D  
Acq On : 29 Mar 2017 1:06 pm  
Operator : fouads  
Sample : fa42152-3  
Misc : op64367,sw4369,15.1,,,1,1,soil  
ALS Vial : 11 Sample Multiplier: 1

Inst : MSBNA01

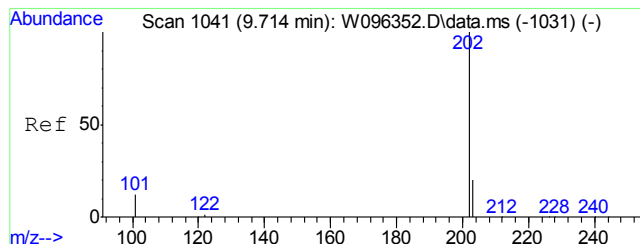
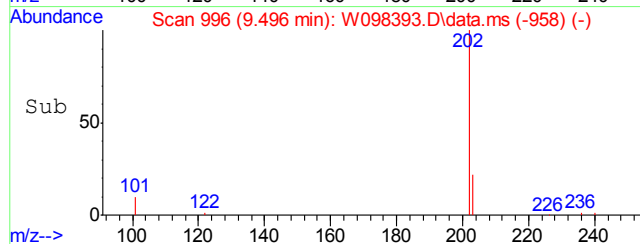
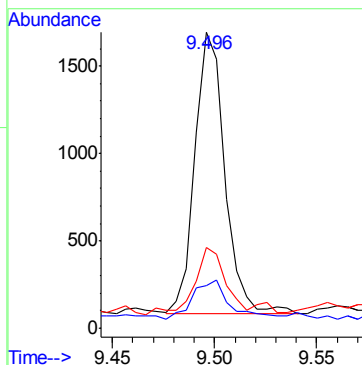
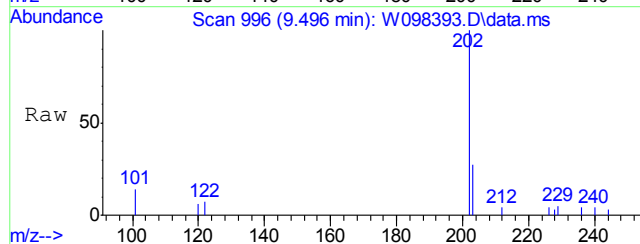
Quant Time: Mar 29 14:45:56 2017  
Quant Method : C:\msdchem\1\METHODS\simpahf.m  
Quant Title : PAH's by 8270 SIM  
QLast Update : Thu Mar 02 08:24:54 2017  
Response via : Initial Calibration





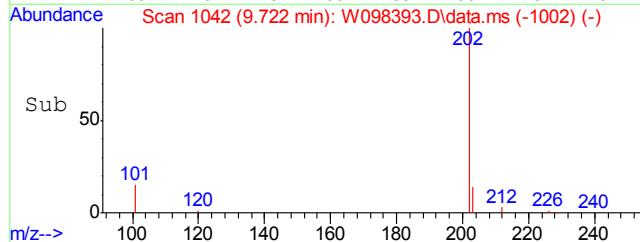
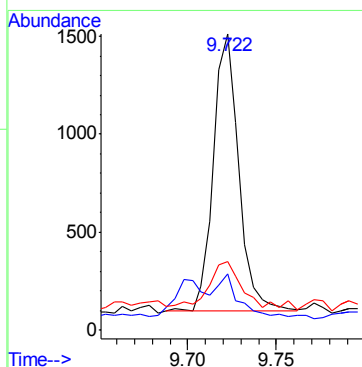
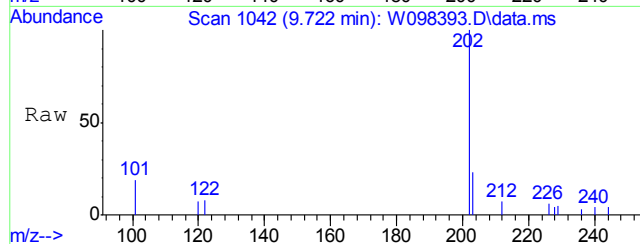
#19  
Fluoranthene  
Concen: 0.06 ppm  
RT: 9.496 min Scan# 996  
Delta R.T. -0.013 min  
Lab File: W098393.D  
Acq: 29 Mar 17 1:06 pm

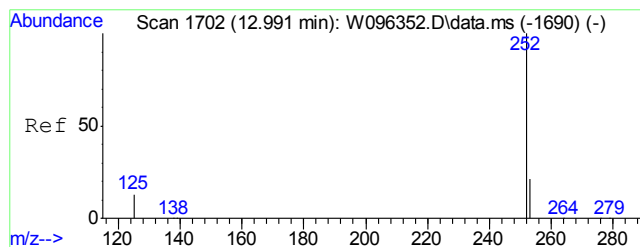
Tgt Ion	Ratio	Lower	Upper
202	100		
101	10.6	0.0	43.2
203	22.2	0.0	50.3



#21  
Pyrene  
Concen: 0.04 ppm  
RT: 9.722 min Scan# 1042  
Delta R.T. -0.004 min  
Lab File: W098393.D  
Acq: 29 Mar 17 1:06 pm

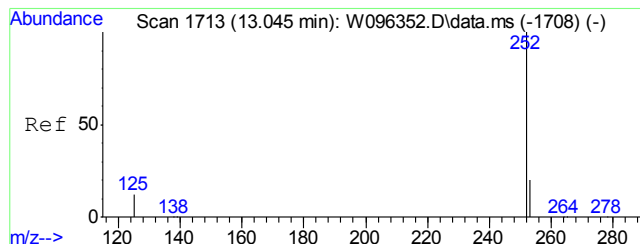
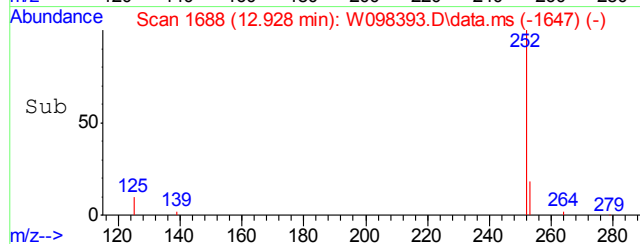
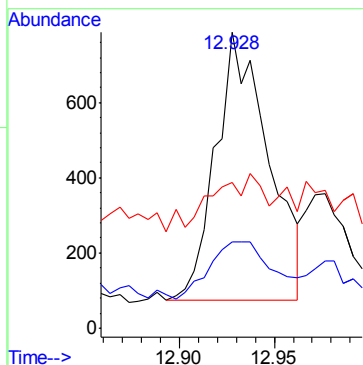
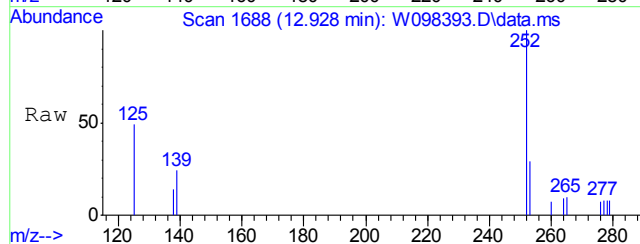
Tgt Ion	Ratio	Lower	Upper
202	100		
101	13.6	0.0	45.4
203	16.8	0.0	50.4





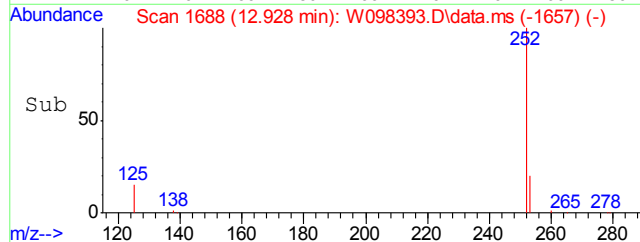
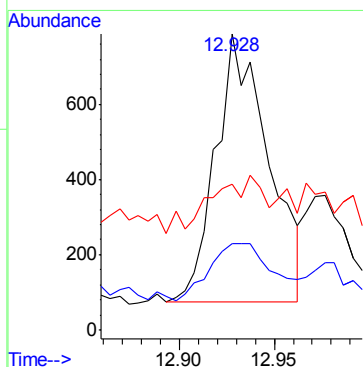
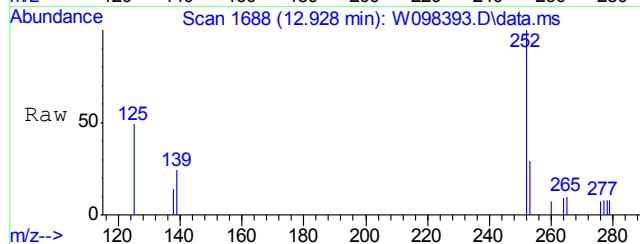
#26  
Benzo[b]fluoranthene  
Concen: 0.06 ppm  
RT: 12.928 min Scan# 1688  
Delta R.T. 0.004 min  
Lab File: W098393.D  
Acq: 29 Mar 17 1:06 pm

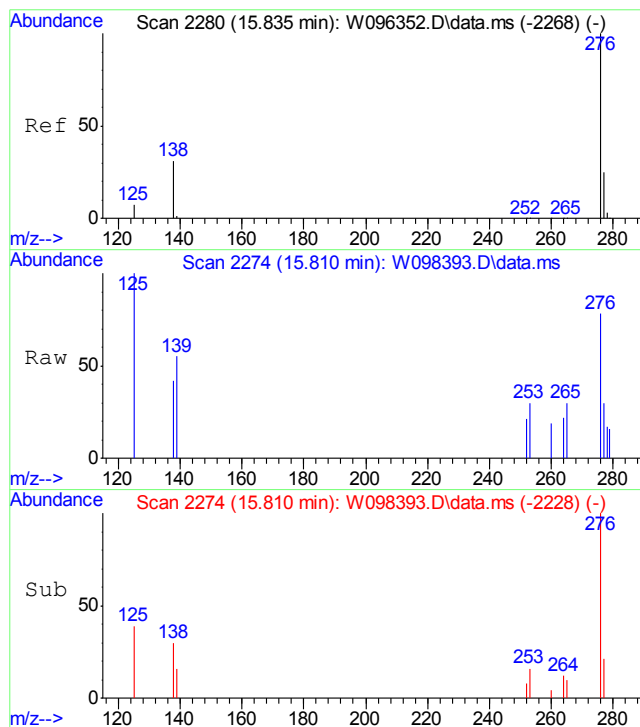
Tgt Ion	Ratio	Lower	Upper
252	100		
253	19.2	0.0	53.3
125	16.9	0.0	46.8



#27  
Benzo[k]fluoranthene  
Concen: 0.06 ppm  
RT: 12.928 min Scan# 1688  
Delta R.T. -0.045 min  
Lab File: W098393.D  
Acq: 29 Mar 17 1:06 pm

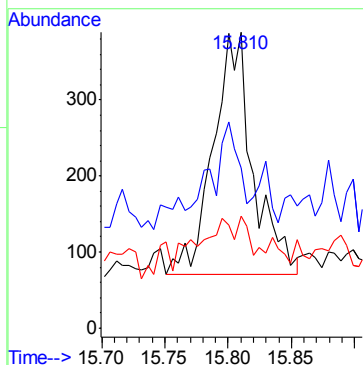
Tgt Ion	Ratio	Lower	Upper
252	100		
253	19.2	0.0	53.2
125	16.9	0.0	47.1





#29  
 Indeno[1,2,3-cd]pyrene  
 Concen: 0.04 ppm  
 RT: 15.810 min Scan# 2274  
 Delta R.T. 0.025 min  
 Lab File: W098393.D  
 Acq: 29 Mar 17 1:06 pm

Tgt Ion	Ratio	Lower	Upper
276	100		
138	16.3	6.4	66.4
277	10.7	0.0	54.9



7.1.3

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\SW4369\  
 Data File : W098394.D  
 Acq On : 29 Mar 2017 1:29 pm  
 Operator : fouads  
 Sample : fa42152-4 Inst : MSBNA01  
 Misc : op64367,sw4369,15.1,,,1,1,soil  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Mar 29 14:46:16 2017  
 Quant Method : C:\msdchem\1\METHODS\simpahf.m  
 Quant Title : PAH's by 8270 SIM  
 QLast Update : Thu Mar 02 08:24:54 2017  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	5.535	136	96589	4.00	ppm	0.00
6) Acenaphthene-d10	7.080	164	55859	4.00	ppm	-0.01
13) Phenanthrene-d10	8.401	188	83315	4.00	ppm	-0.01
20) Chrysene-d12	11.185	240	71454	4.00	ppm	-0.01
25) Perylene-d12	13.626	264	67062	4.00	ppm	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	4.922	82	37455	5.43	ppm	0.00
Spiked Amount 10.000	Range 40 - 105		Recovery =	54.30%		
7) 2-Fluorobiphenyl	6.473	172	104527	6.11	ppm	-0.02
Spiked Amount 10.000	Range 43 - 107		Recovery =	61.10%		
14) 2,4,6-Tribromophenol	7.786	330	20236	13.16	ppm	-0.01
Spiked Amount 20.000	Range 42 - 108		Recovery =	65.80%		
22) Terphenyl-d14	9.877	244	79136	5.36	ppm	0.00
Spiked Amount 10.000	Range 45 - 119		Recovery =	53.60%		
Target Compounds						
16) Phenanthrene	8.421	178	1392	0.06	ppm	96
19) Fluoranthene	9.498	202	4592	0.18	ppm	94
21) Pyrene	9.719	202	4048	0.13	ppm	92
23) Benzo[a]anthracene	11.175	228	1462	0.05	ppm	92
24) Chrysene	11.224	228	2057	0.08	ppm	95
26) Benzo[b]fluoranthene	12.927	252	3024	0.12	ppm	92
27) Benzo[k]fluoranthene	12.972	252	943	0.04	ppm	87
28) Benzo[a]pyrene	13.518	252	1637	0.07	ppm	88
29) Indeno[1,2,3-cd]pyrene	15.795	276	1421	0.07	ppm	94
31) Benzo[g,h,i]perylene	16.243	276	1420	0.06	ppm	94

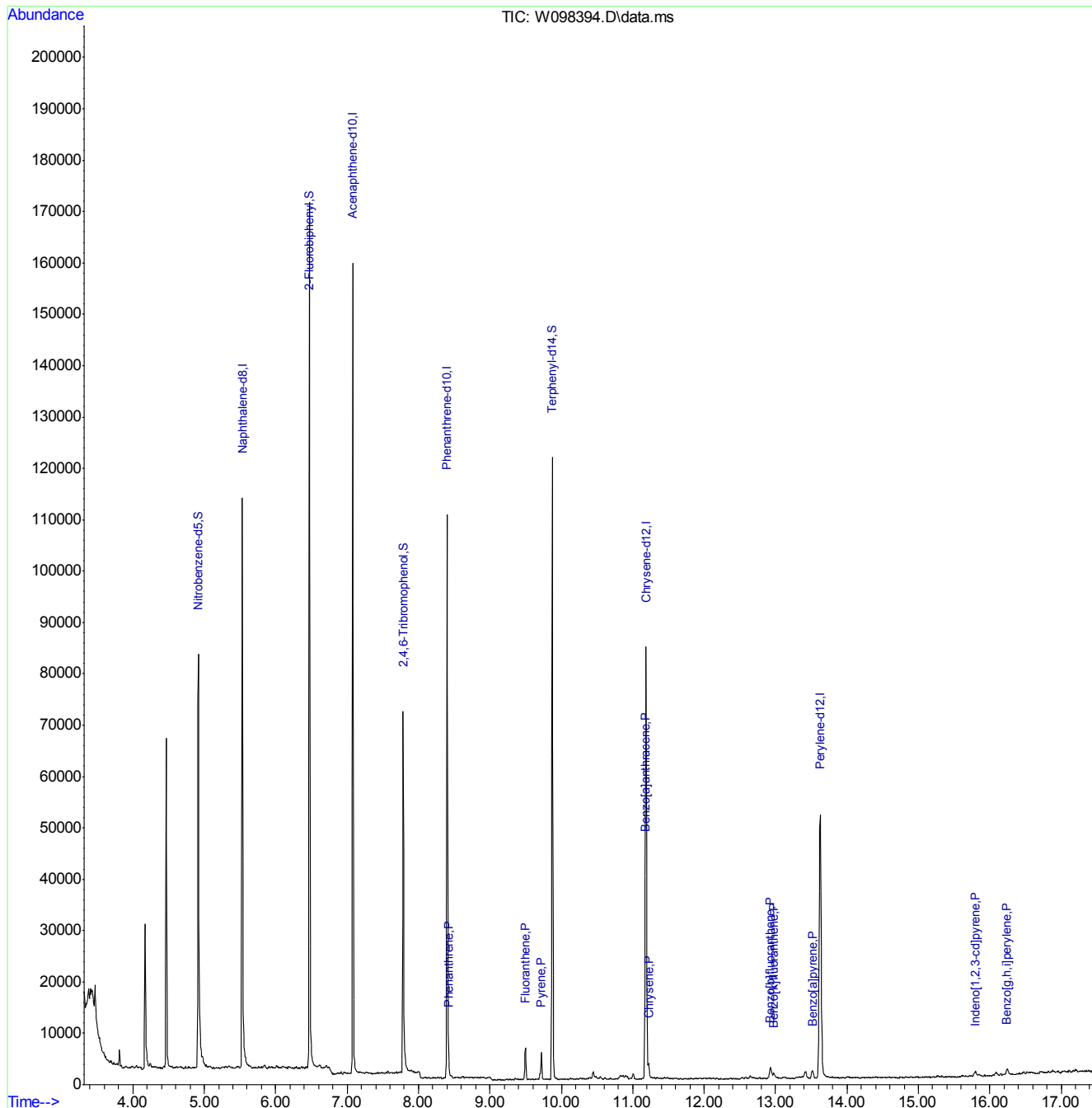
(#) = qualifier out of range (m) = manual integration (+) = signals summed

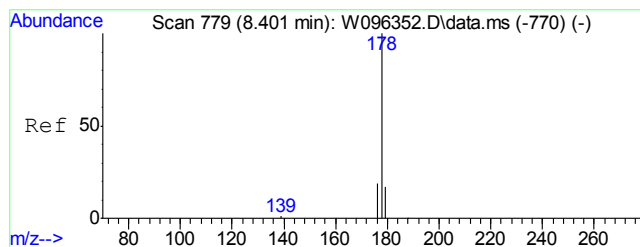
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\SW4369\  
 Data File : W098394.D  
 Acq On : 29 Mar 2017 1:29 pm  
 Operator : fouads  
 Sample : fa42152-4  
 Misc : op64367,sw4369,15.1,,,1,1,soil  
 ALS Vial : 12 Sample Multiplier: 1

Inst : MSBNA01

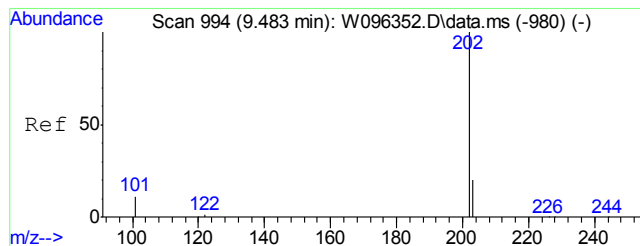
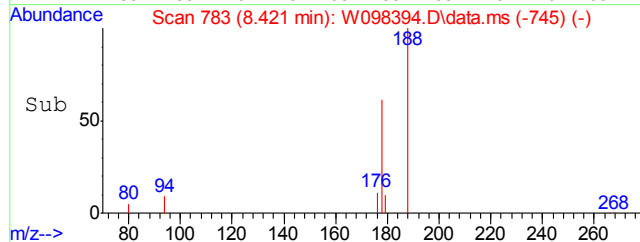
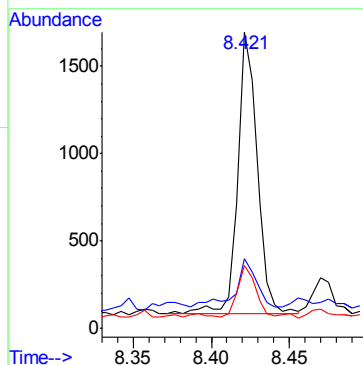
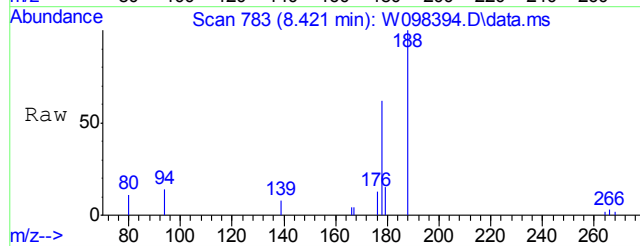
Quant Time: Mar 29 14:46:16 2017  
 Quant Method : C:\msdchem\1\METHODS\simpahf.m  
 Quant Title : PAH's by 8270 SIM  
 QLast Update : Thu Mar 02 08:24:54 2017  
 Response via : Initial Calibration





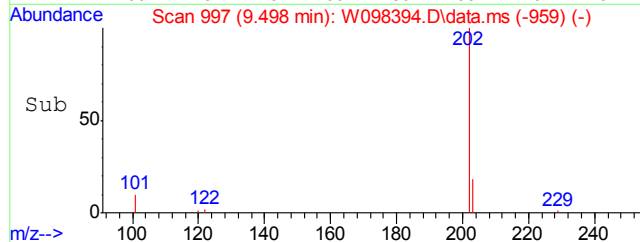
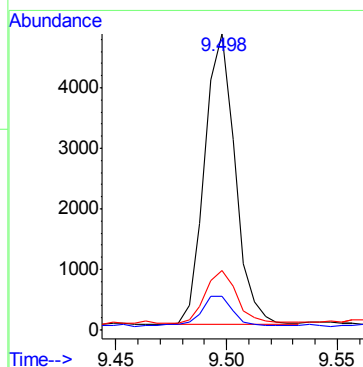
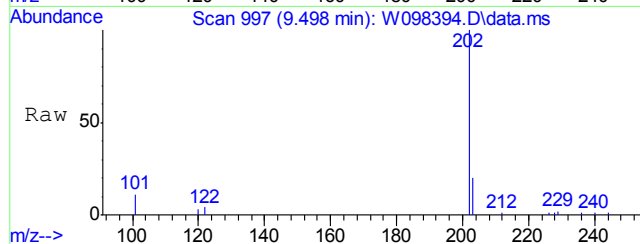
#16  
Phenanthrene  
Concen: 0.06 ppm  
RT: 8.421 min Scan# 783  
Delta R.T. -0.013 min  
Lab File: W098394.D  
Acq: 29 Mar 17 1:29 pm

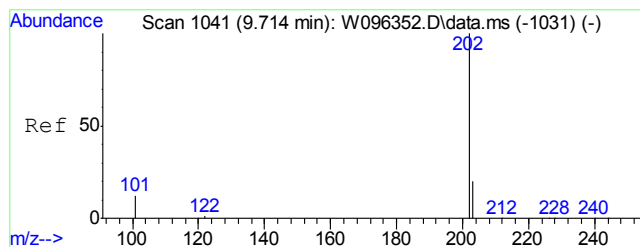
Tgt Ion:178 Resp: 1392  
Ion Ratio Lower Upper  
178 100  
179 14.6 0.0 47.5  
176 18.5 0.0 49.1



#19  
Fluoranthene  
Concen: 0.18 ppm  
RT: 9.498 min Scan# 997  
Delta R.T. -0.011 min  
Lab File: W098394.D  
Acq: 29 Mar 17 1:29 pm

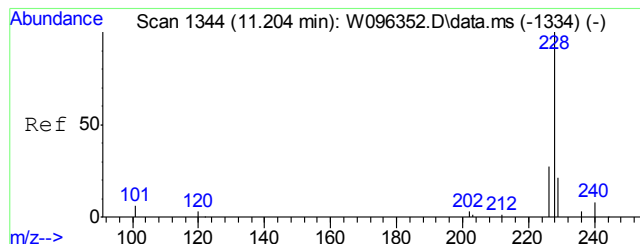
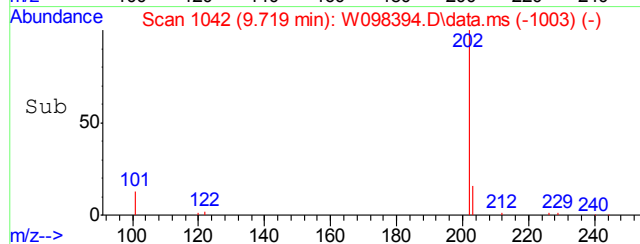
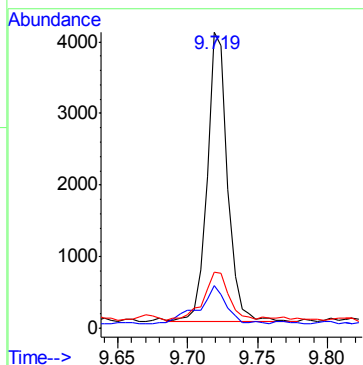
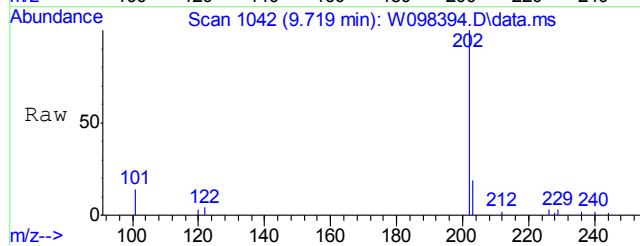
Tgt Ion:202 Resp: 4592  
Ion Ratio Lower Upper  
202 100  
101 9.9 0.0 43.2  
203 18.1 0.0 50.3





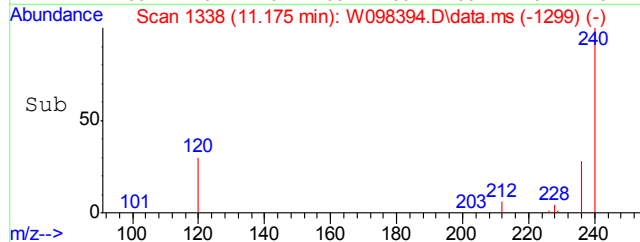
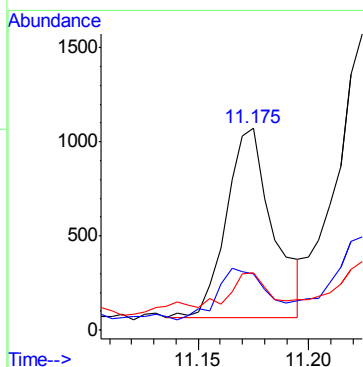
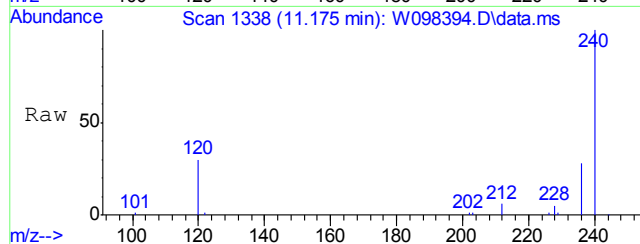
#21  
Pyrene  
Concen: 0.13 ppm  
RT: 9.719 min Scan# 1042  
Delta R.T. -0.008 min  
Lab File: W098394.D  
Acq: 29 Mar 17 1:29 pm

Tgt Ion	Ratio	Lower	Upper
202	100		
101	13.0	0.0	45.4
203	16.2	0.0	50.4

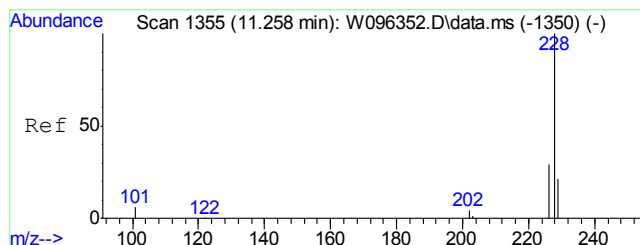


#23  
Benzo[a]anthracene  
Concen: 0.05 ppm  
RT: 11.175 min Scan# 1338  
Delta R.T. -0.008 min  
Lab File: W098394.D  
Acq: 29 Mar 17 1:29 pm

Tgt Ion	Ratio	Lower	Upper
228	100		
226	21.5	0.0	56.0
229	18.8	0.0	51.7

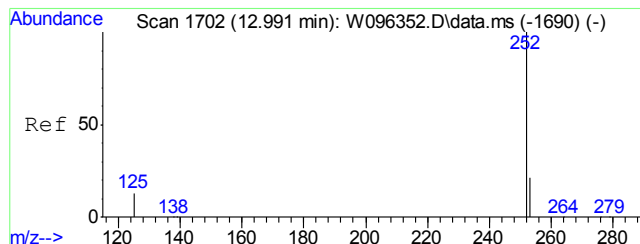
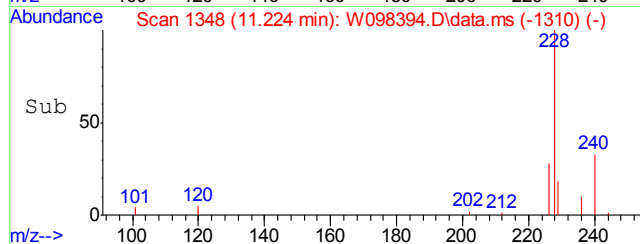
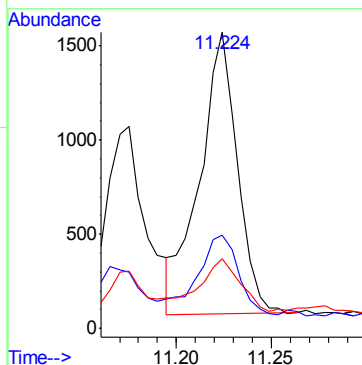
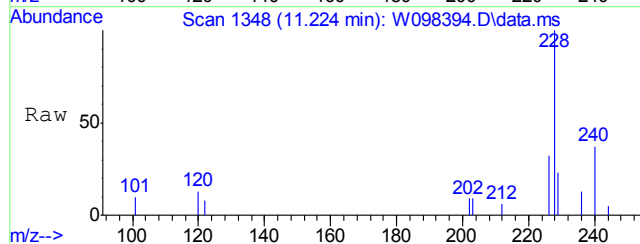






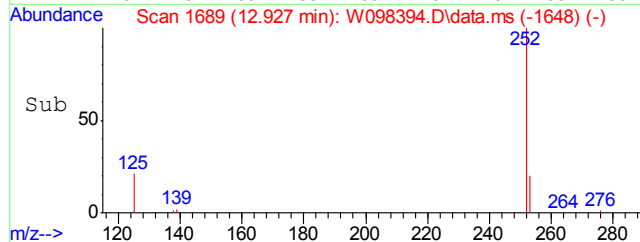
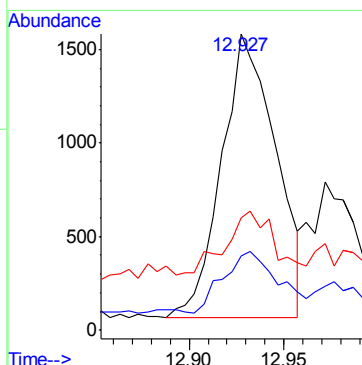
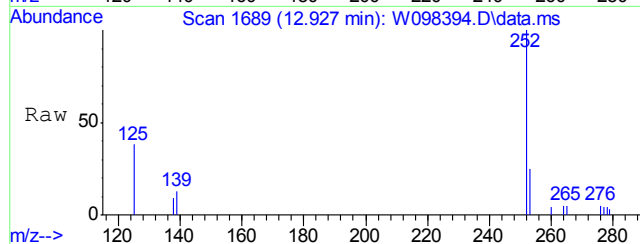
#24  
Chrysene  
Concen: 0.08 ppm  
RT: 11.224 min Scan# 1348  
Delta R.T. -0.014 min  
Lab File: W098394.D  
Acq: 29 Mar 17 1:29 pm

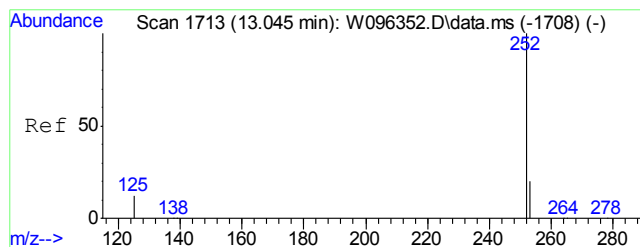
Tgt Ion	Ratio	Lower	Upper
228	100		
226	27.6	0.0	58.8
229	17.3	0.0	51.2



#26  
Benzo[b]fluoranthene  
Concen: 0.12 ppm  
RT: 12.927 min Scan# 1689  
Delta R.T. 0.004 min  
Lab File: W098394.D  
Acq: 29 Mar 17 1:29 pm

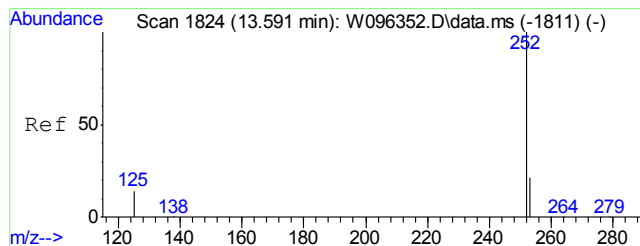
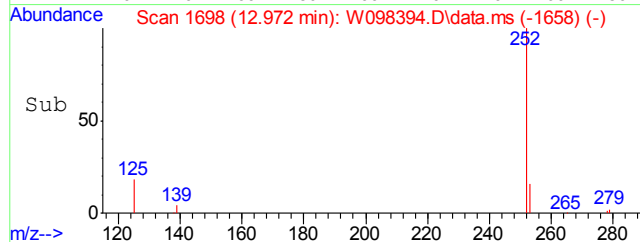
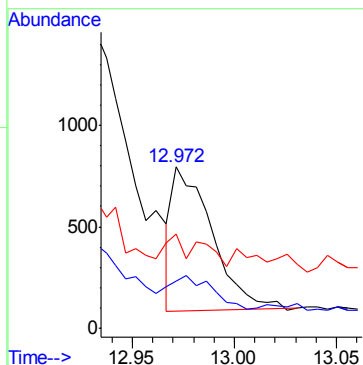
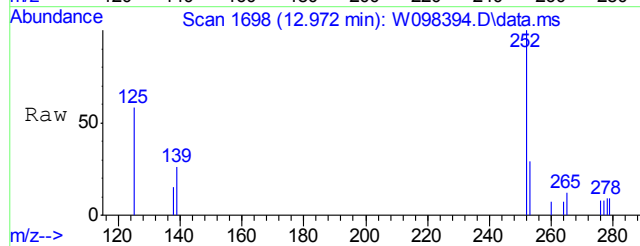
Tgt Ion	Ratio	Lower	Upper
252	100		
253	18.5	0.0	53.3
125	19.4	0.0	46.8





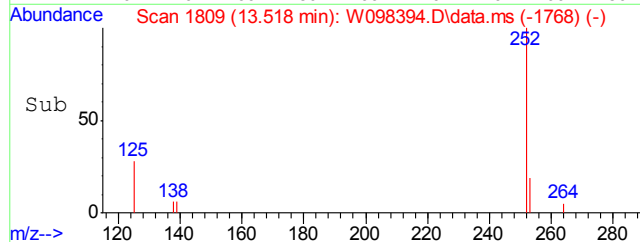
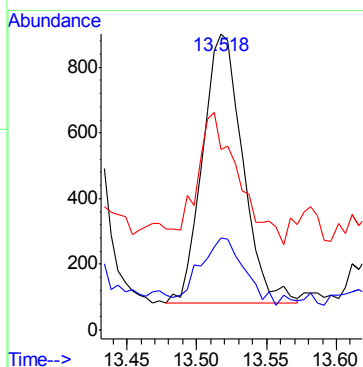
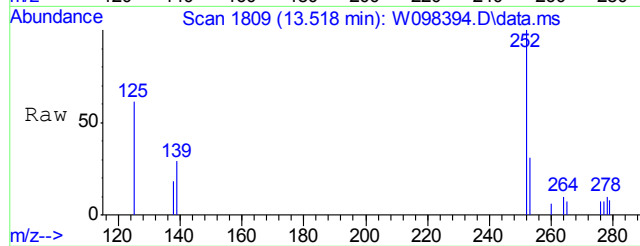
#27  
Benzo[k]fluoranthene  
Concen: 0.04 ppm  
RT: 12.972 min Scan# 1698  
Delta R.T. -0.001 min  
Lab File: W098394.D  
Acq: 29 Mar 17 1:29 pm

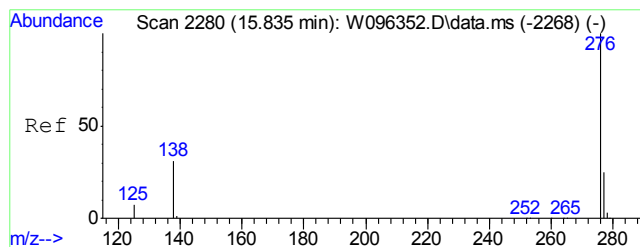
Tgt Ion	Ratio	Lower	Upper
252	100		
253	14.0	0.0	53.2
125	19.3	0.0	47.1



#28  
Benzo[a]pyrene  
Concen: 0.07 ppm  
RT: 13.518 min Scan# 1809  
Delta R.T. -0.001 min  
Lab File: W098394.D  
Acq: 29 Mar 17 1:29 pm

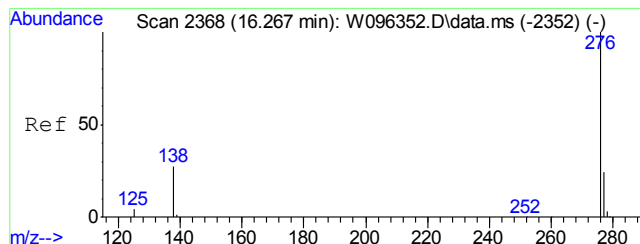
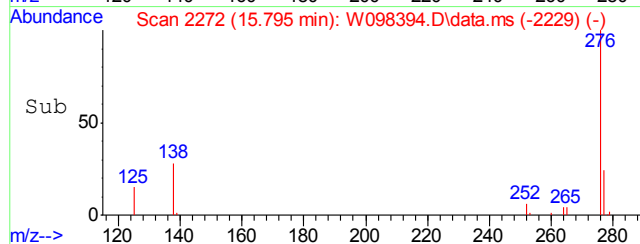
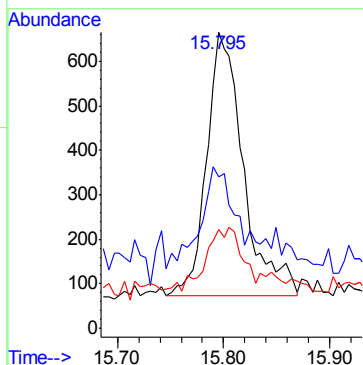
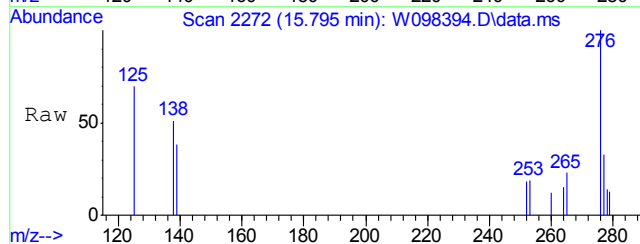
Tgt Ion	Ratio	Lower	Upper
252	100		
253	22.4	0.0	53.3
125	28.7	0.0	47.6





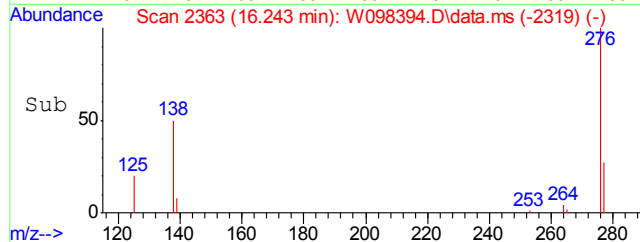
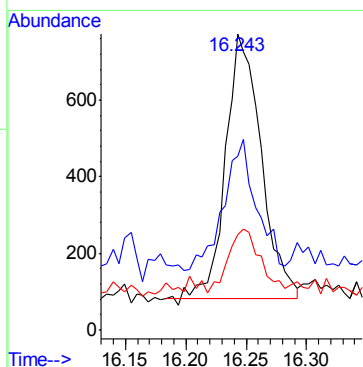
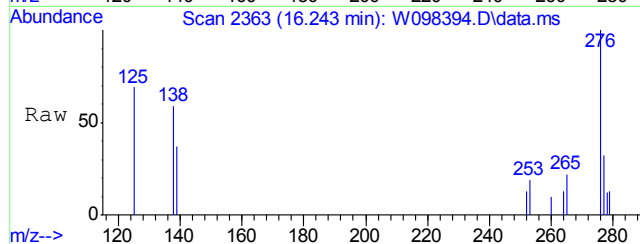
#29  
 Indeno[1,2,3-cd]pyrene  
 Concen: 0.07 ppm  
 RT: 15.795 min Scan# 2272  
 Delta R.T. 0.011 min  
 Lab File: W098394.D  
 Acq: 29 Mar 17 1:29 pm

Tgt Ion	Ratio	Lower	Upper
276	100		
138	33.2	6.4	66.4
277	21.2	0.0	54.9



#31  
 Benzo[g,h,i]perylene  
 Concen: 0.06 ppm  
 RT: 16.243 min Scan# 2363  
 Delta R.T. 0.017 min  
 Lab File: W098394.D  
 Acq: 29 Mar 17 1:29 pm

Tgt Ion	Ratio	Lower	Upper
276	100		
138	37.6	7.9	67.9
277	18.2	0.0	55.3



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\SW4369\  
 Data File : W098395.D  
 Acq On : 29 Mar 2017 1:52 pm  
 Operator : fouads  
 Sample : fa42152-5 Inst : MSBNA01  
 Misc : op64367,sw4369,15.0,,,1,1,soil  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Mar 30 07:49:46 2017  
 Quant Method : C:\msdchem\1\METHODS\simpahf.m  
 Quant Title : PAH's by 8270 SIM  
 QLast Update : Thu Mar 02 08:24:54 2017  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	5.535	136	90329	4.00	ppm	0.00
6) Acenaphthene-d10	7.079	164	49648	4.00	ppm	-0.01
13) Phenanthrene-d10	8.401	188	79863	4.00	ppm	-0.01
20) Chrysene-d12	11.185	240	69325	4.00	ppm	-0.01
25) Perylene-d12	13.621	264	64338	4.00	ppm	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	4.922	82	36761	5.70	ppm	0.00
Spiked Amount 10.000	Range 40 - 105		Recovery =	57.00%		
7) 2-Fluorobiphenyl	6.473	172	98121	6.46	ppm	-0.02
Spiked Amount 10.000	Range 43 - 107		Recovery =	64.60%		
14) 2,4,6-Tribromophenol	7.786	330	19816	13.44	ppm	-0.01
Spiked Amount 20.000	Range 42 - 108		Recovery =	67.20%		
22) Terphenyl-d14	9.876	244	75679	5.28	ppm	0.00
Spiked Amount 10.000	Range 45 - 119		Recovery =	52.80%		
Target Compounds						
19) Fluoranthene	9.498	202	4062	0.16	ppm	92
21) Pyrene	9.719	202	3415	0.11	ppm	95
23) Benzo[a]anthracene	11.170	228	1261	0.05	ppm	90
24) Chrysene	11.224	228	1653	0.07	ppm	97
26) Benzo[b]fluoranthene	12.928	252	2624	0.11	ppm	92
28) Benzo[a]pyrene	13.523	252	1447	0.06	ppm	61
29) Indeno[1,2,3-cd]pyrene	15.805	276	1007	0.05	ppm	83
31) Benzo[g,h,i]perylene	16.253	276	1139	0.05	ppm	82

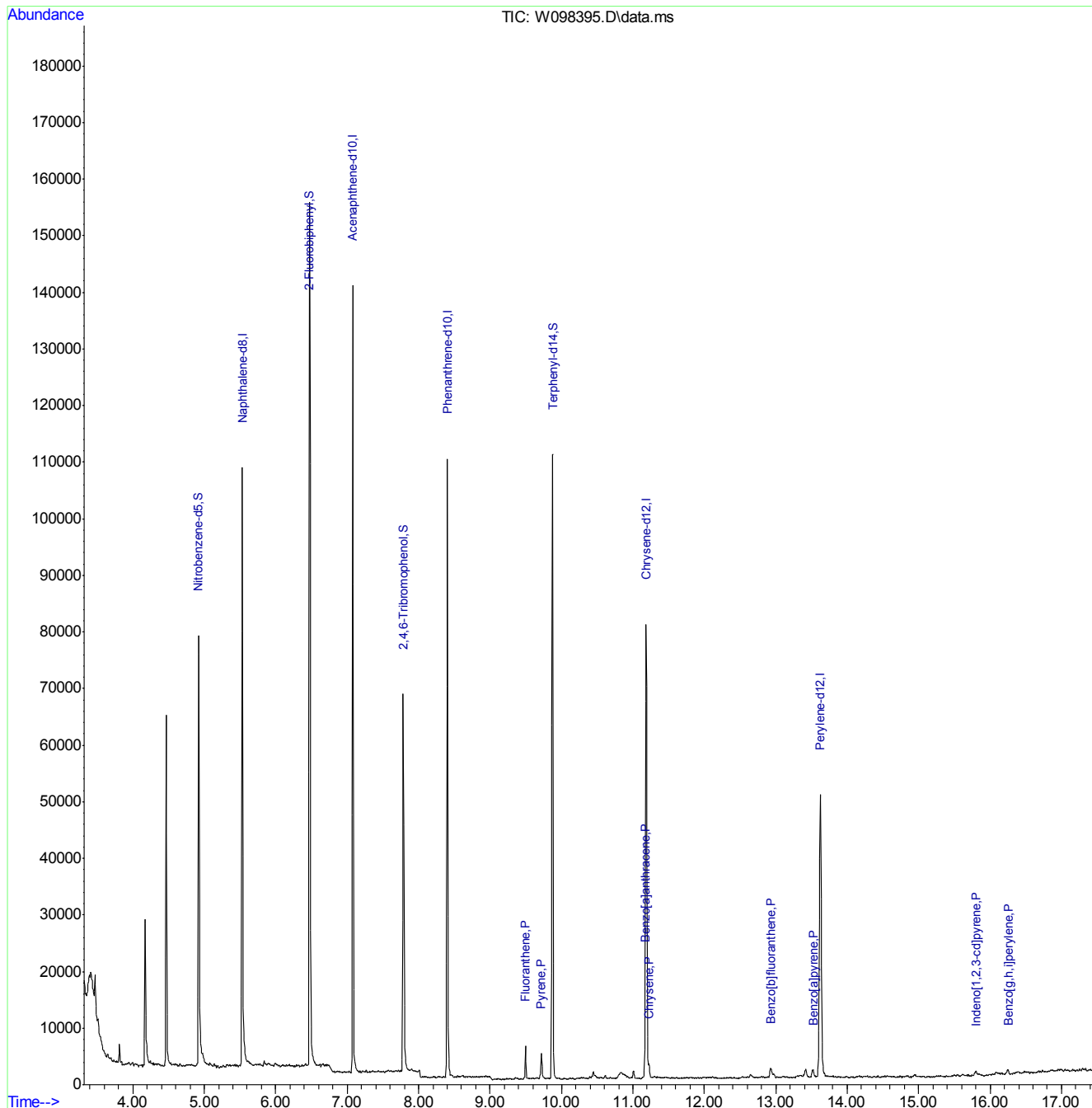
(#) = qualifier out of range (m) = manual integration (+) = signals summed

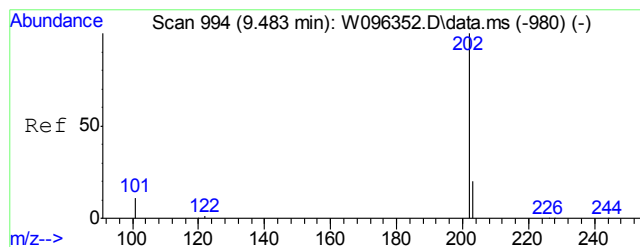
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\SW4369\  
 Data File : W098395.D  
 Acq On : 29 Mar 2017 1:52 pm  
 Operator : fouads  
 Sample : fa42152-5  
 Misc : op64367,sw4369,15.0,,,1,1,soil  
 ALS Vial : 13 Sample Multiplier: 1

Inst : MSBNA01

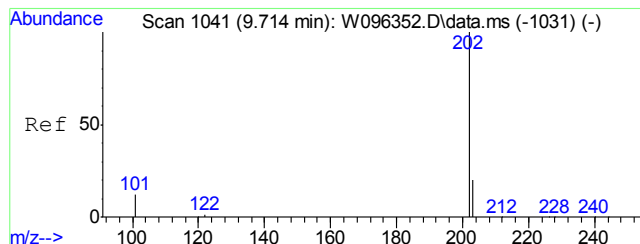
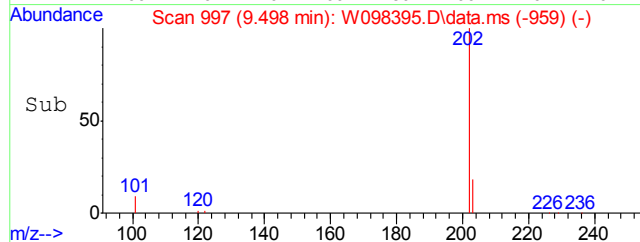
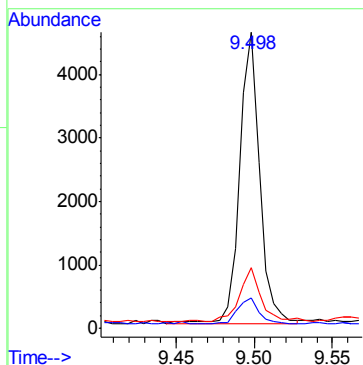
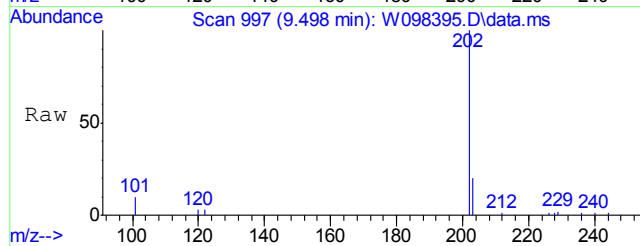
Quant Time: Mar 30 07:49:46 2017  
 Quant Method : C:\msdchem\1\METHODS\simpahf.m  
 Quant Title : PAH's by 8270 SIM  
 QLast Update : Thu Mar 02 08:24:54 2017  
 Response via : Initial Calibration





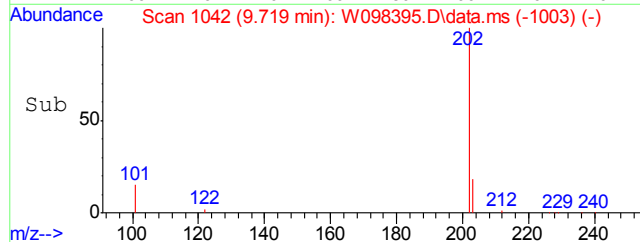
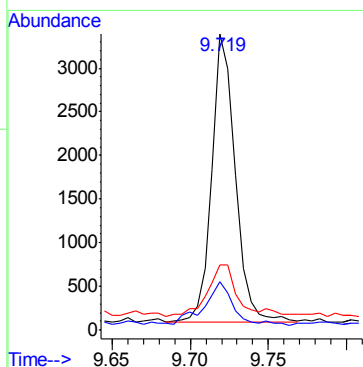
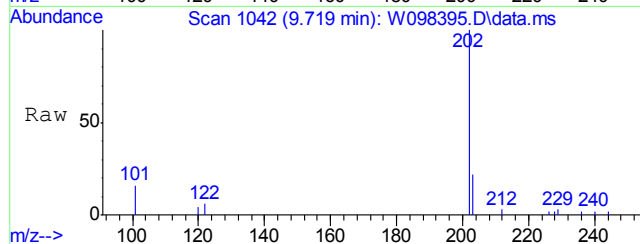
#19  
Fluoranthene  
Concen: 0.16 ppm  
RT: 9.498 min Scan# 997  
Delta R.T. -0.011 min  
Lab File: W098395.D  
Acq: 29 Mar 17 1:52 pm

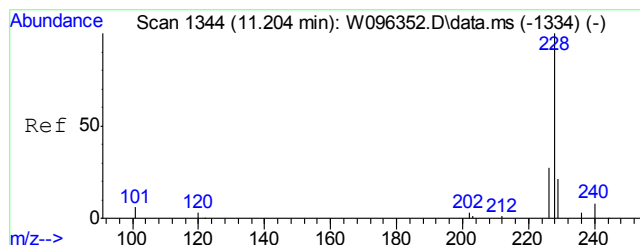
Tgt Ion	Ratio	Lower	Upper
202	100		
101	8.6	0.0	43.2
203	17.9	0.0	50.3



#21  
Pyrene  
Concen: 0.11 ppm  
RT: 9.719 min Scan# 1042  
Delta R.T. -0.008 min  
Lab File: W098395.D  
Acq: 29 Mar 17 1:52 pm

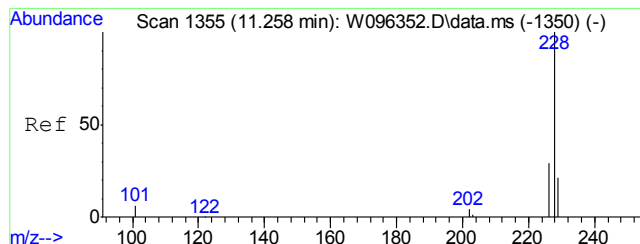
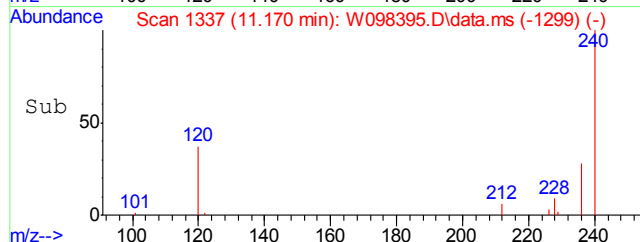
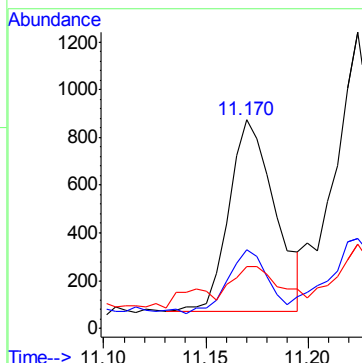
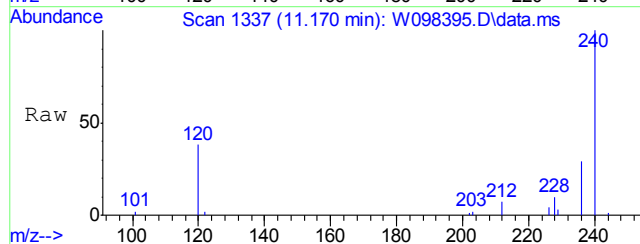
Tgt Ion	Ratio	Lower	Upper
202	100		
101	14.4	0.0	45.4
203	17.5	0.0	50.4





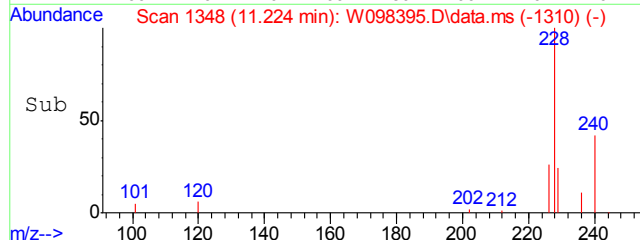
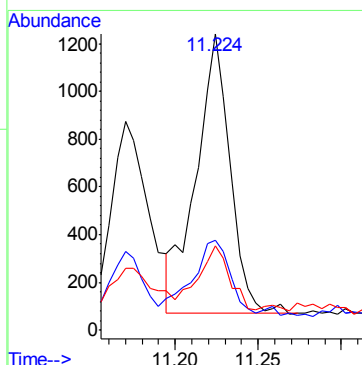
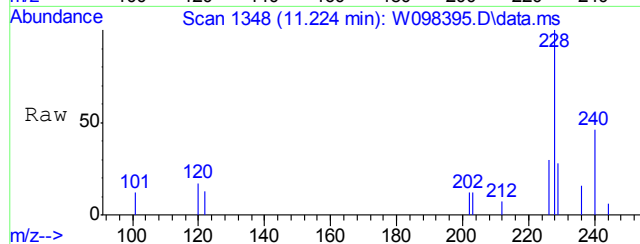
#23  
Benzo[a]anthracene  
Concen: 0.05 ppm  
RT: 11.170 min Scan# 1337  
Delta R.T. -0.013 min  
Lab File: W098395.D  
Acq: 29 Mar 17 1:52 pm

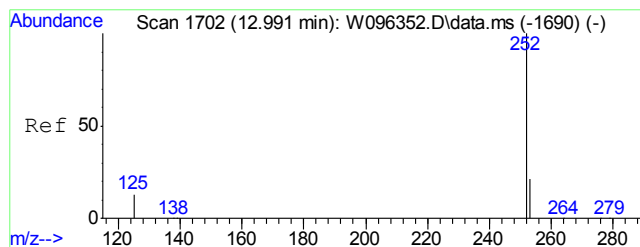
Tgt Ion	Ratio	Lower	Upper
228	100		
226	33.5	0.0	56.0
229	19.9	0.0	51.7



#24  
Chrysene  
Concen: 0.07 ppm  
RT: 11.224 min Scan# 1348  
Delta R.T. -0.014 min  
Lab File: W098395.D  
Acq: 29 Mar 17 1:52 pm

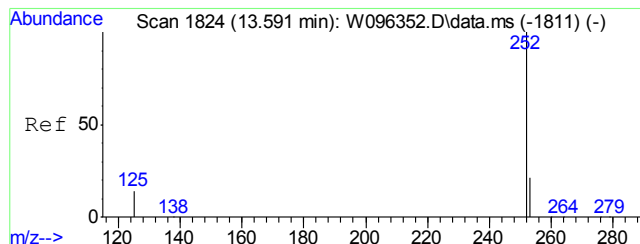
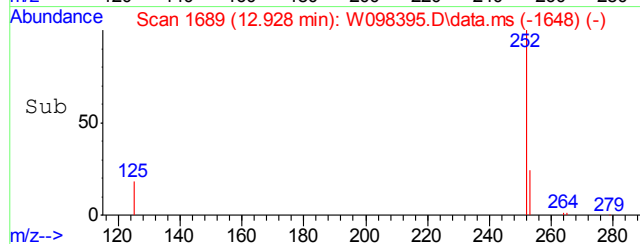
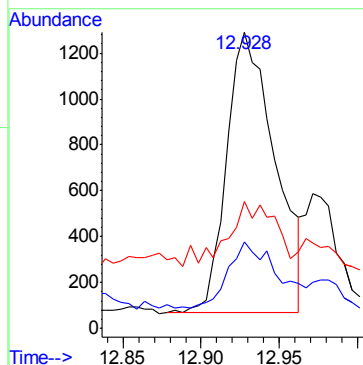
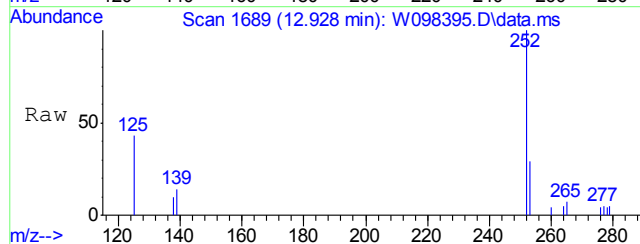
Tgt Ion	Ratio	Lower	Upper
228	100		
226	26.9	0.0	58.8
229	20.2	0.0	51.2





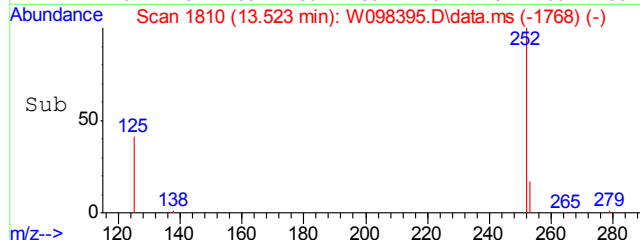
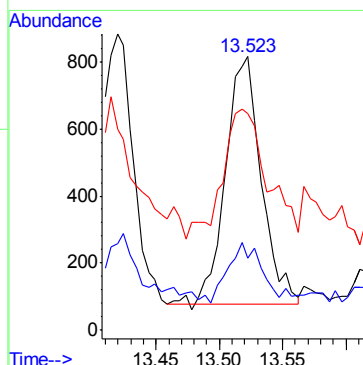
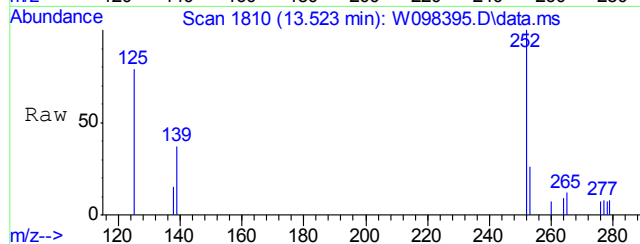
#26  
Benzo[b]fluoranthene  
Concen: 0.11 ppm  
RT: 12.928 min Scan# 1689  
Delta R.T. 0.004 min  
Lab File: W098395.D  
Acq: 29 Mar 17 1:52 pm

Tgt Ion	Ratio	Lower	Upper
252	100		
253	22.2	0.0	53.3
125	23.5	0.0	46.8

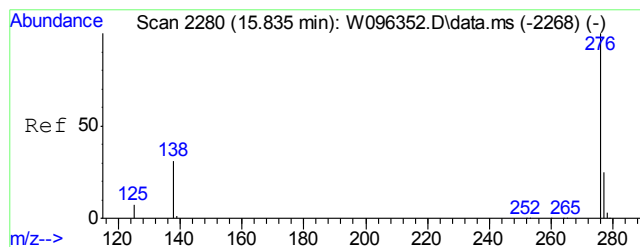


#28  
Benzo[a]pyrene  
Concen: 0.06 ppm  
RT: 13.523 min Scan# 1810  
Delta R.T. 0.004 min  
Lab File: W098395.D  
Acq: 29 Mar 17 1:52 pm

Tgt Ion	Ratio	Lower	Upper
252	100		
253	13.7	0.0	53.3
125	45.8	0.0	47.6

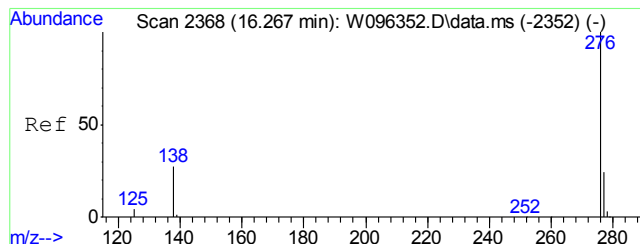
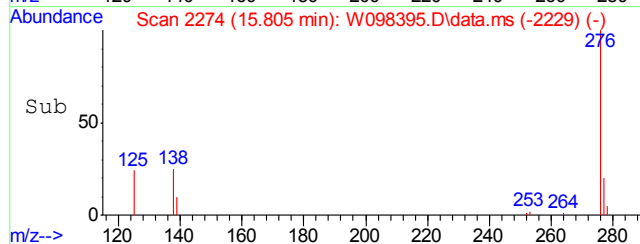
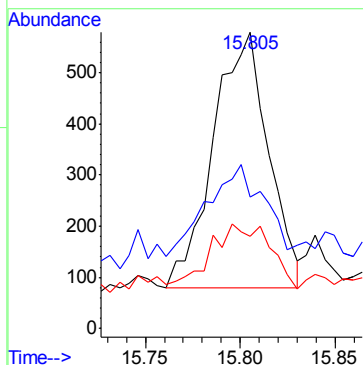
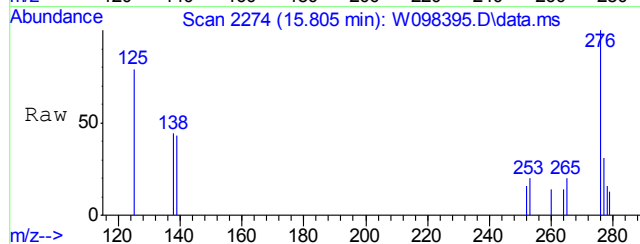






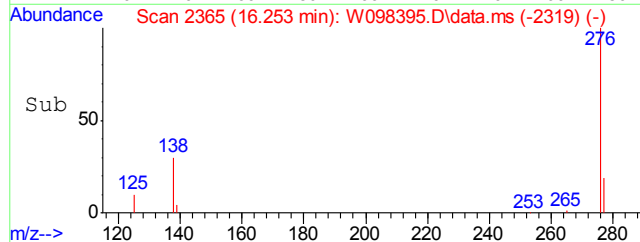
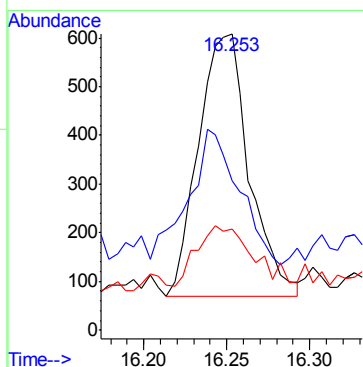
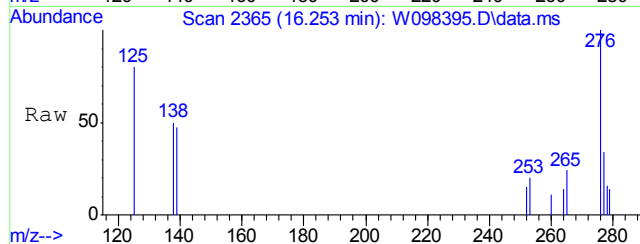
#29  
 Indeno[1,2,3-cd]pyrene  
 Concen: 0.05 ppm  
 RT: 15.805 min Scan# 2274  
 Delta R.T. 0.021 min  
 Lab File: W098395.D  
 Acq: 29 Mar 17 1:52 pm

Tgt Ion	Ratio	Lower	Upper
276	100		
138	22.2	6.4	66.4
277	21.0	0.0	54.9



#31  
 Benzo[g,h,i]perylene  
 Concen: 0.05 ppm  
 RT: 16.253 min Scan# 2365  
 Delta R.T. 0.027 min  
 Lab File: W098395.D  
 Acq: 29 Mar 17 1:52 pm

Tgt Ion	Ratio	Lower	Upper
276	100		
138	22.8	7.9	67.9
277	21.3	0.0	55.3

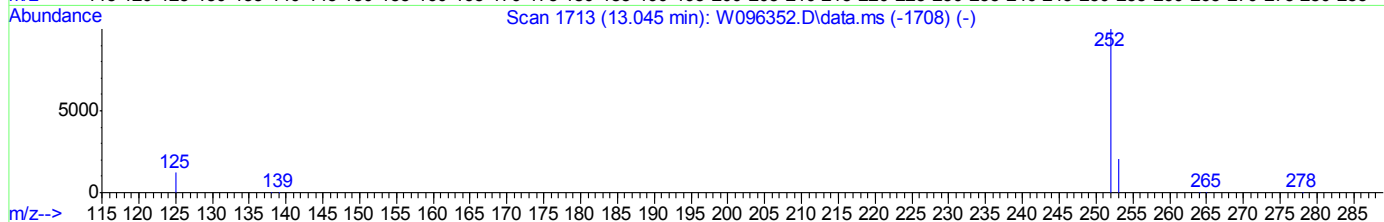
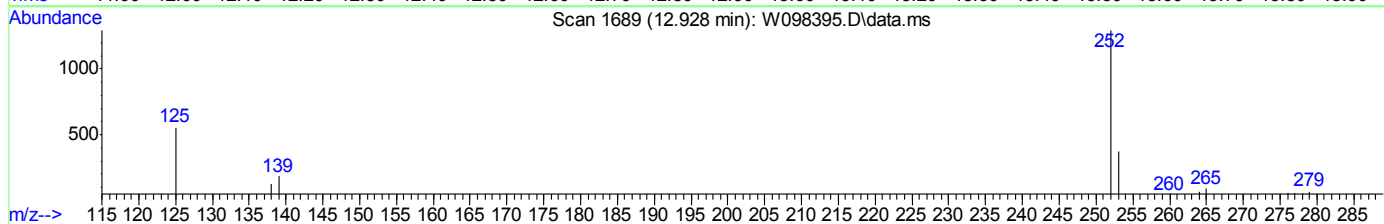
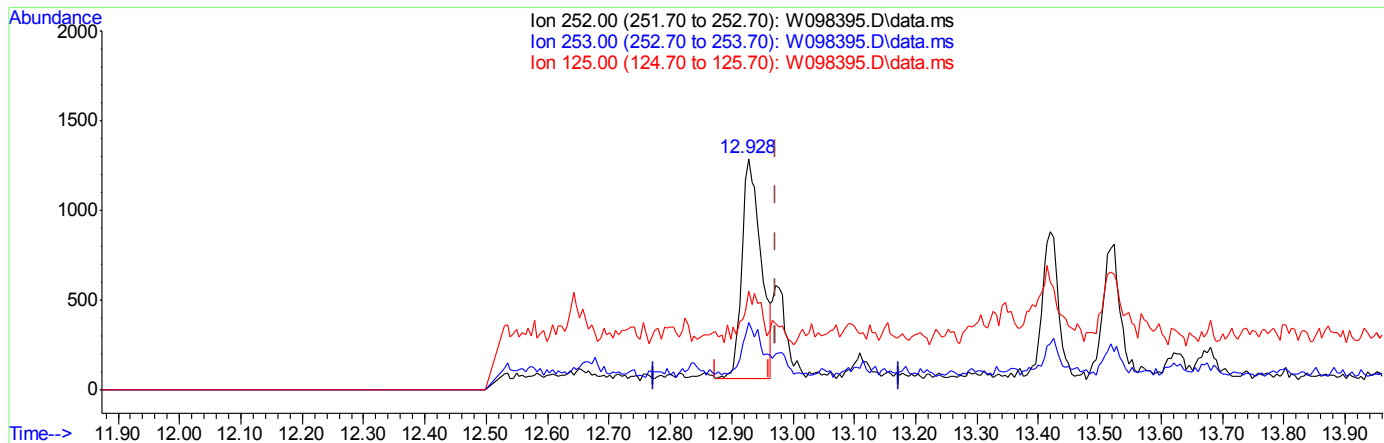


# Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\SW4369\  
 Data File : W098395.D  
 Acq On : 29 Mar 2017 1:52 pm  
 Operator : fouads  
 Sample : fa42152-5  
 Misc : op64367,sw4369,15.0,,,1,1,soil  
 ALS Vial : 13 Sample Multiplier: 1

Inst : MSBNA01

Quant Time: Mar 29 14:39:10 2017  
 Quant Method : C:\msdchem\1\METHODS\simpahf.m  
 Quant Title : PAH's by 8270 SIM  
 QLast Update : Thu Mar 02 08:24:54 2017  
 Response via : Initial Calibration



TIC: W098395.D\data.ms

(27) Benzo[k]fluoranthene (P)

12.928min (-0.045) 0.11ppm

response 2645

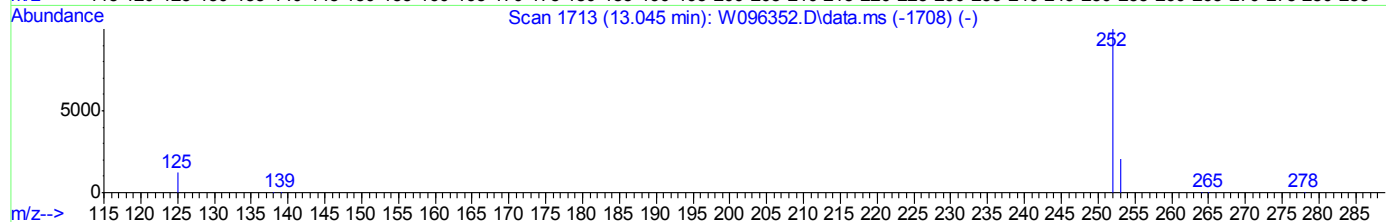
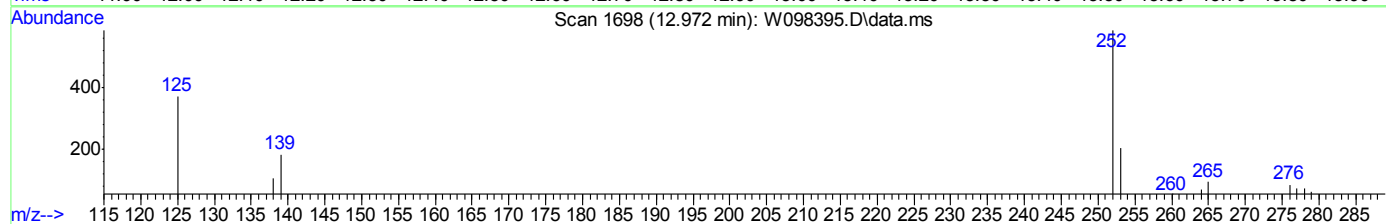
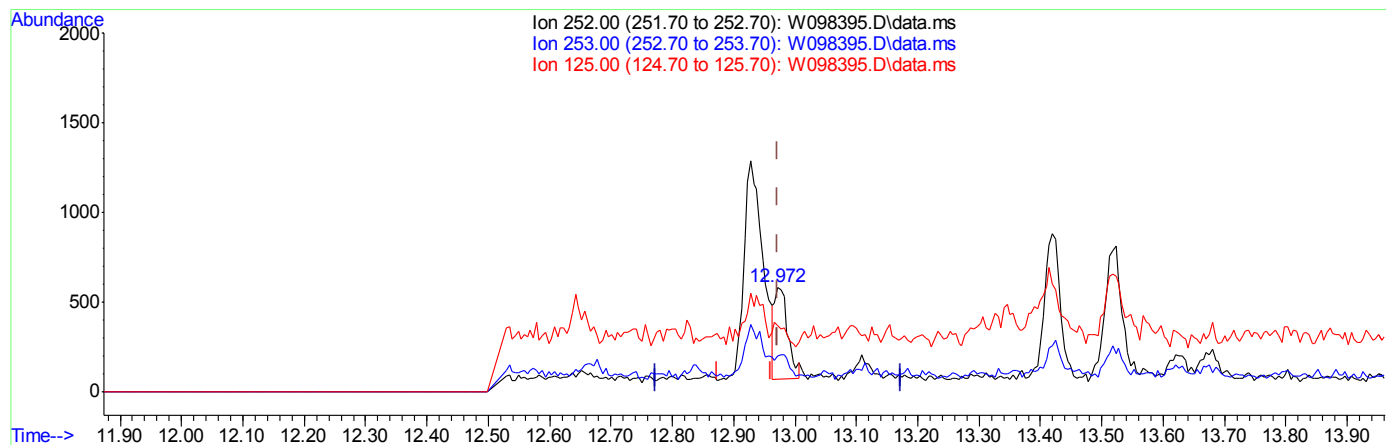
Ion	Exp%	Act%
252.00	100	100
253.00	23.20	23.01
125.00	17.10	21.93
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\SW4369\  
 Data File : W098395.D  
 Acq On : 29 Mar 2017 1:52 pm  
 Operator : fouads  
 Sample : fa42152-5  
 Misc : op64367,sw4369,15.0,,,1,1,soil  
 ALS Vial : 13 Sample Multiplier: 1

Inst : MSBNA01

Quant Time: Mar 29 14:39:10 2017  
 Quant Method : C:\msdchem\1\METHODS\simpahf.m  
 Quant Title : PAH's by 8270 SIM  
 QLast Update : Thu Mar 02 08:24:54 2017  
 Response via : Initial Calibration



TIC: W098395.D\data.ms

(27) Benzo[k]fluoranthene (P)

12.972min (-0.001) 0.03ppm m

response 774

Ion	Exp%	Act%
252.00	100	100
253.00	23.20	34.64
125.00	17.10	63.48#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\SW4369\  
 Data File : W098396.D  
 Acq On : 29 Mar 2017 2:14 pm  
 Operator : fouads  
 Sample : fa42152-6 Inst : MSBNA01  
 Misc : op64367,sw4369,15.0,,,1,1,soil  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Mar 29 14:47:53 2017  
 Quant Method : C:\msdchem\1\METHODS\simpahf.m  
 Quant Title : PAH's by 8270 SIM  
 QLast Update : Thu Mar 02 08:24:54 2017  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	5.534	136	85224	4.00	ppm	0.00
6) Acenaphthene-d10	7.079	164	46044	4.00	ppm	-0.01
13) Phenanthrene-d10	8.401	188	72108	4.00	ppm	-0.01
20) Chrysene-d12	11.185	240	62163	4.00	ppm	-0.01
25) Perylene-d12	13.626	264	59364	4.00	ppm	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	4.922	82	38439	6.32	ppm	0.00
Spiked Amount 10.000	Range 40 - 105		Recovery =	63.20%		
7) 2-Fluorobiphenyl	6.473	172	103249	7.36	ppm	-0.02
Spiked Amount 10.000	Range 43 - 107		Recovery =	73.60%		
14) 2,4,6-Tribromophenol	7.786	330	19916	14.96	ppm	-0.01
Spiked Amount 20.000	Range 42 - 108		Recovery =	74.80%		
22) Terphenyl-d14	9.876	244	73636	5.73	ppm	0.00
Spiked Amount 10.000	Range 45 - 119		Recovery =	57.30%		
Target Compounds						
16) Phenanthrene	8.421	178	972	0.05	ppm	88
19) Fluoranthene	9.498	202	3104	0.14	ppm	92
21) Pyrene	9.719	202	2823	0.10	ppm	94
23) Benzo[a]anthracene	11.170	228	859	0.04	ppm	87
24) Chrysene	11.219	228	1440	0.07	ppm	94
26) Benzo[b]fluoranthene	12.927	252	2190	0.10	ppm	98
28) Benzo[a]pyrene	13.517	252	1213	0.06	ppm	79
29) Indeno[1,2,3-cd]pyrene	15.795	276	952	0.06	ppm	92
31) Benzo[g,h,i]perylene	16.243	276	1011	0.05	ppm	94

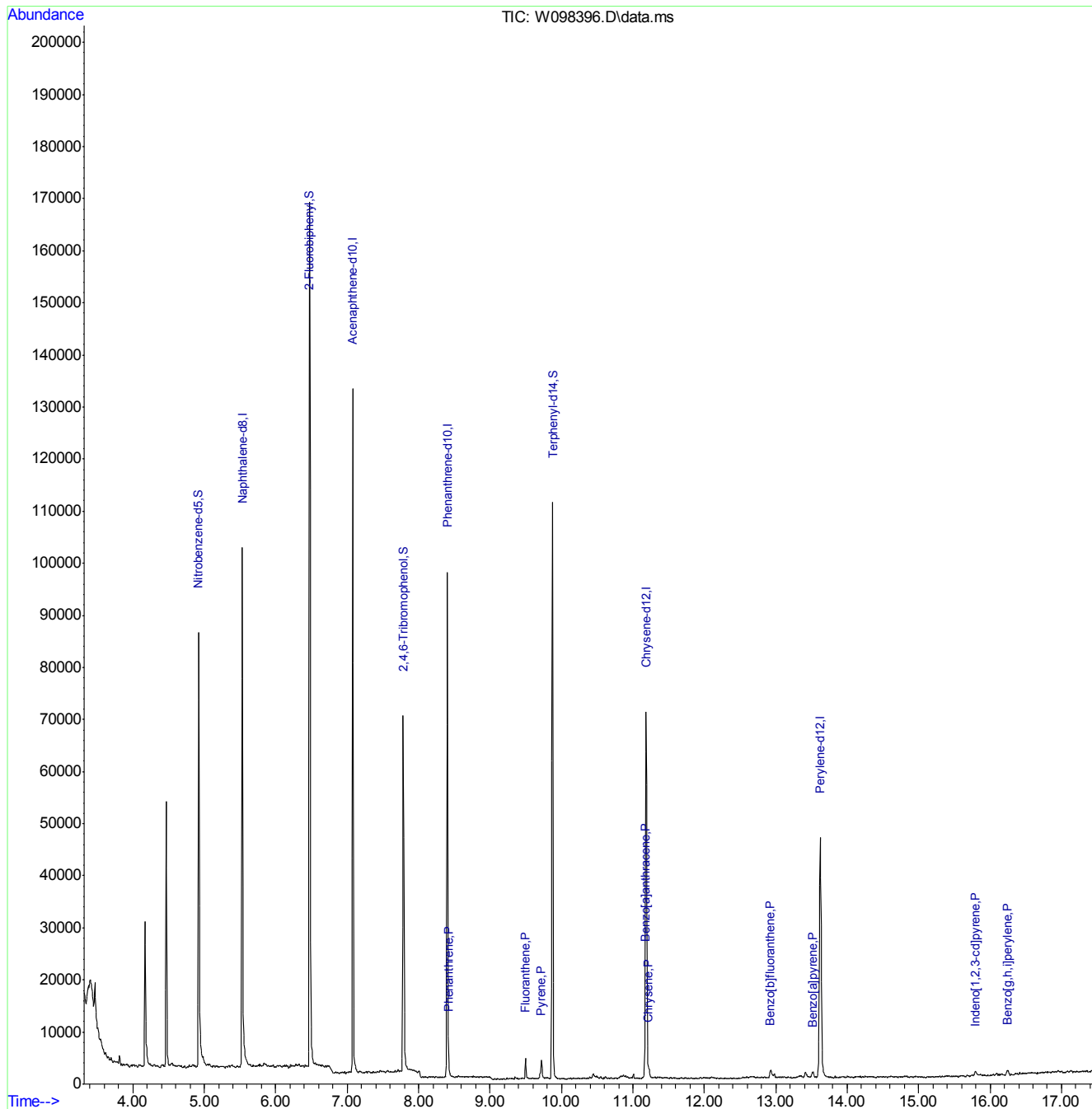
(#) = qualifier out of range (m) = manual integration (+) = signals summed

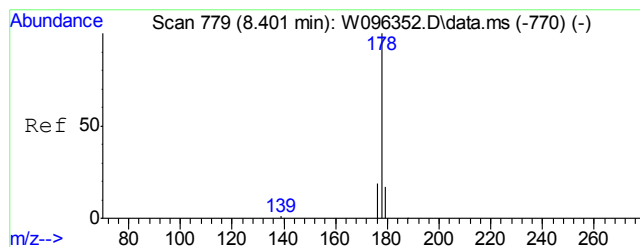
## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\SW4369\  
Data File : W098396.D  
Acq On : 29 Mar 2017 2:14 pm  
Operator : fouads  
Sample : fa42152-6  
Misc : op64367,sw4369,15.0,,,1,1,soil  
ALS Vial : 14 Sample Multiplier: 1

Inst : MSBNA01

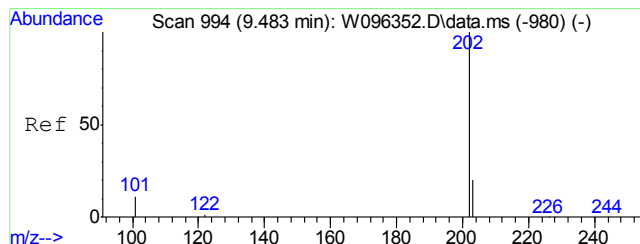
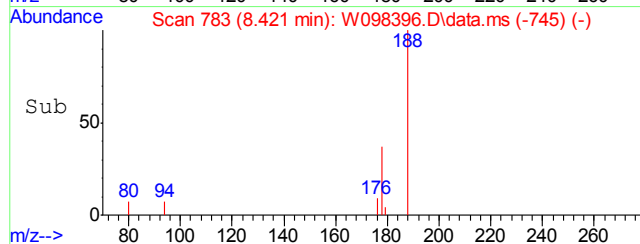
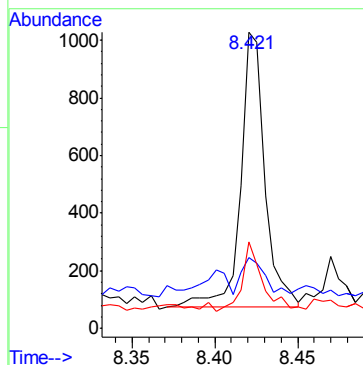
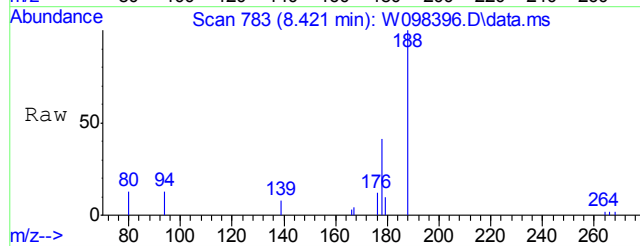
Quant Time: Mar 29 14:47:53 2017  
Quant Method : C:\msdchem\1\METHODS\simpahf.m  
Quant Title : PAH's by 8270 SIM  
QLast Update : Thu Mar 02 08:24:54 2017  
Response via : Initial Calibration





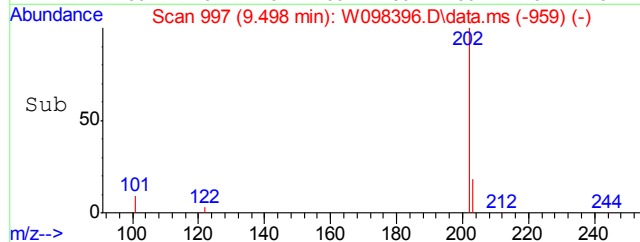
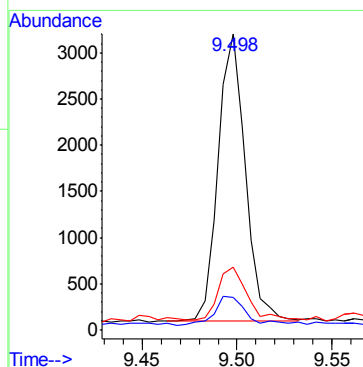
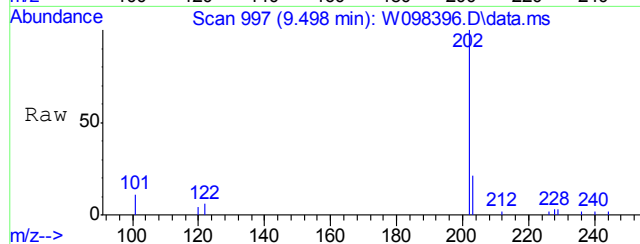
#16  
Phenanthrene  
Concen: 0.05 ppm  
RT: 8.421 min Scan# 783  
Delta R.T. -0.014 min  
Lab File: W098396.D  
Acq: 29 Mar 17 2:14 pm

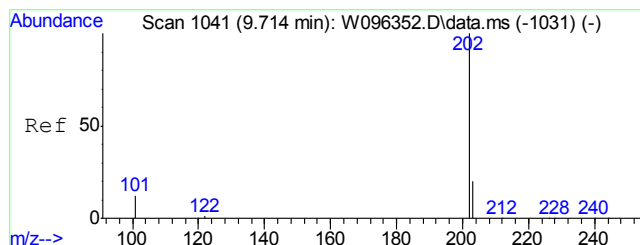
Tgt Ion: 178 Resp: 972  
Ion Ratio Lower Upper  
178 100  
179 11.1 0.0 47.5  
176 23.2 0.0 49.1



#19  
Fluoranthene  
Concen: 0.14 ppm  
RT: 9.498 min Scan# 997  
Delta R.T. -0.011 min  
Lab File: W098396.D  
Acq: 29 Mar 17 2:14 pm

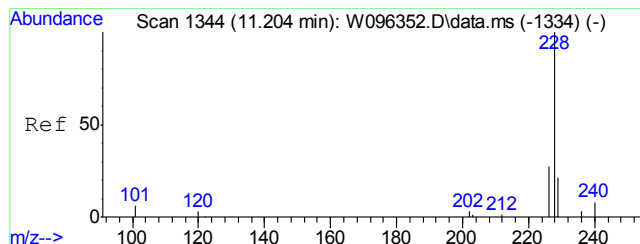
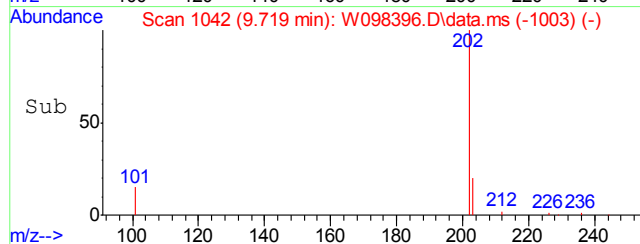
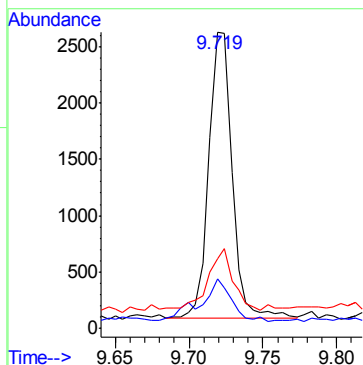
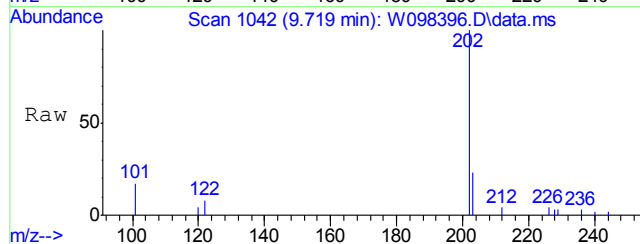
Tgt Ion: 202 Resp: 3104  
Ion Ratio Lower Upper  
202 100  
101 8.8 0.0 43.2  
203 17.9 0.0 50.3





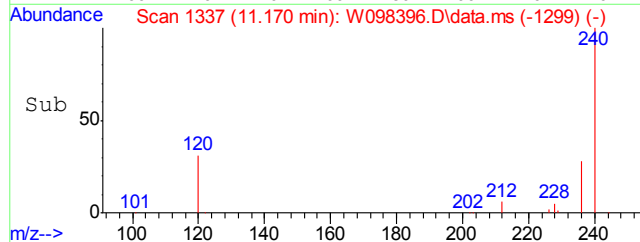
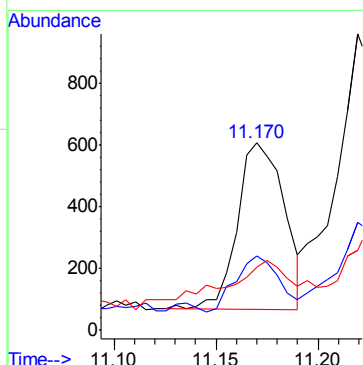
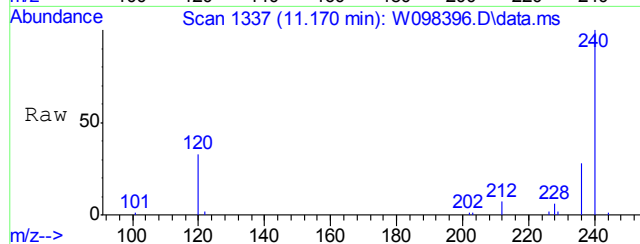
#21  
Pyrene  
Concen: 0.10 ppm  
RT: 9.719 min Scan# 1042  
Delta R.T. -0.008 min  
Lab File: W098396.D  
Acq: 29 Mar 17 2:14 pm

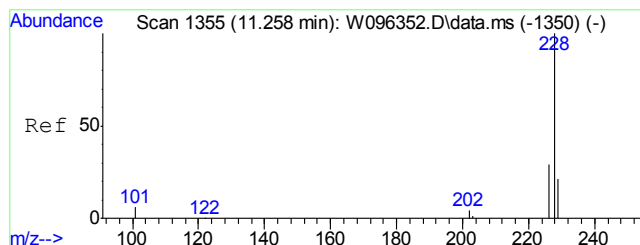
Tgt Ion	Ratio	Lower	Upper
202	100		
101	13.9	0.0	45.4
203	17.1	0.0	50.4



#23  
Benzo[a]anthracene  
Concen: 0.04 ppm  
RT: 11.170 min Scan# 1337  
Delta R.T. -0.014 min  
Lab File: W098396.D  
Acq: 29 Mar 17 2:14 pm

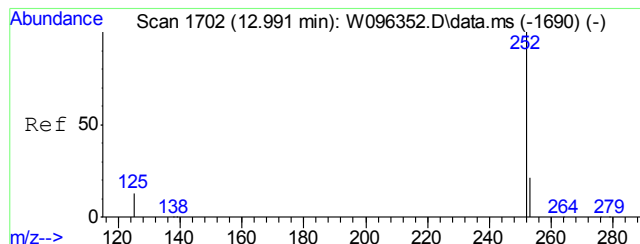
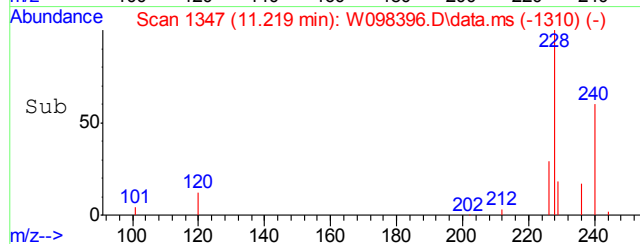
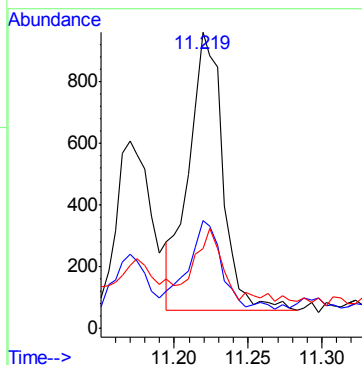
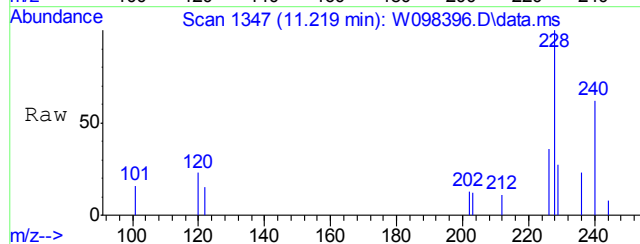
Tgt Ion	Ratio	Lower	Upper
228	100		
226	35.6	0.0	56.0
229	19.0	0.0	51.7





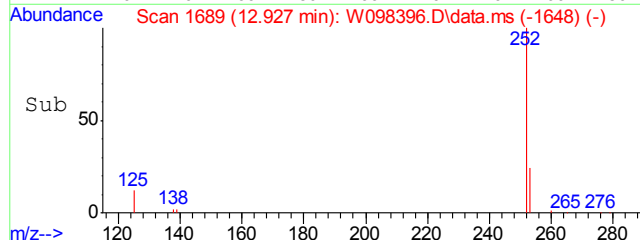
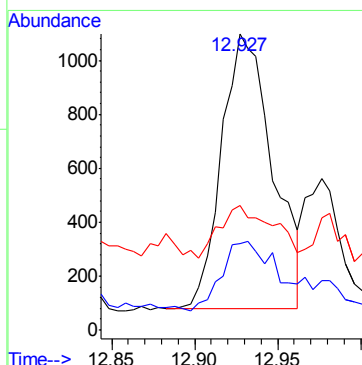
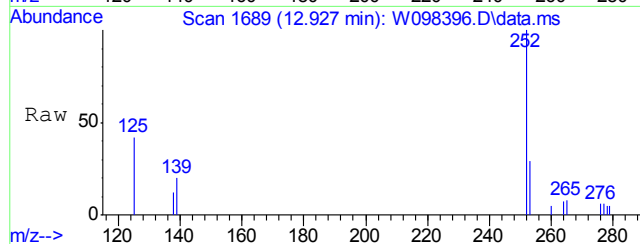
#24  
Chrysene  
Concen: 0.07 ppm  
RT: 11.219 min Scan# 1347  
Delta R.T. -0.019 min  
Lab File: W098396.D  
Acq: 29 Mar 17 2:14 pm

Tgt Ion	Ratio	Lower	Upper
228	100		
226	31.2	0.0	58.8
229	17.2	0.0	51.2

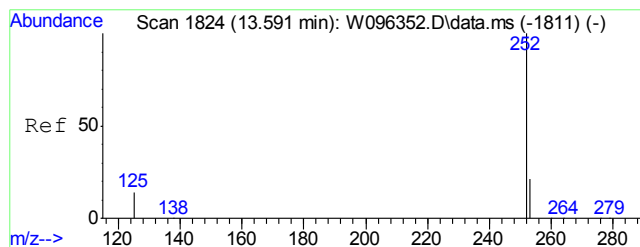


#26  
Benzo[b]fluoranthene  
Concen: 0.10 ppm  
RT: 12.927 min Scan# 1689  
Delta R.T. 0.004 min  
Lab File: W098396.D  
Acq: 29 Mar 17 2:14 pm

Tgt Ion	Ratio	Lower	Upper
252	100		
253	22.1	0.0	53.3
125	16.3	0.0	46.8

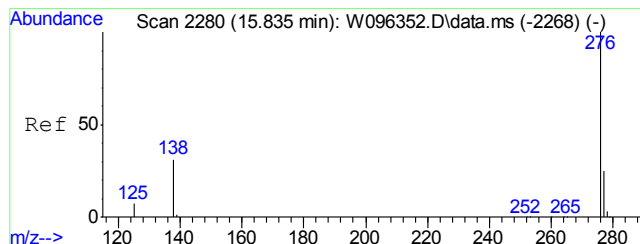
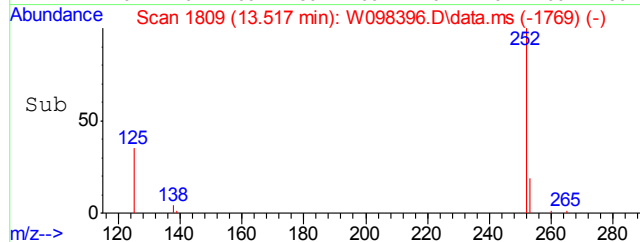
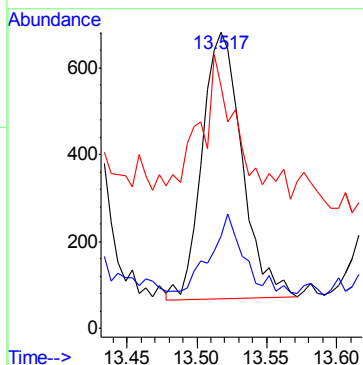
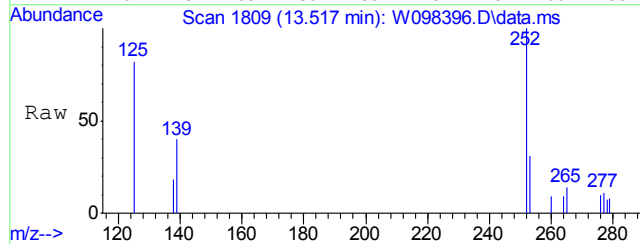






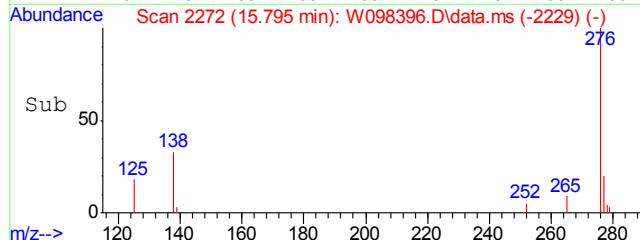
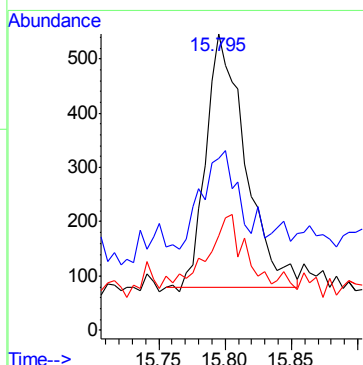
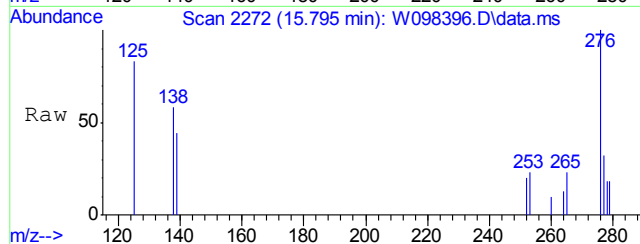
#28  
Benzo[a]pyrene  
Concen: 0.06 ppm  
RT: 13.517 min Scan# 1809  
Delta R.T. -0.001 min  
Lab File: W098396.D  
Acq: 29 Mar 17 2:14 pm

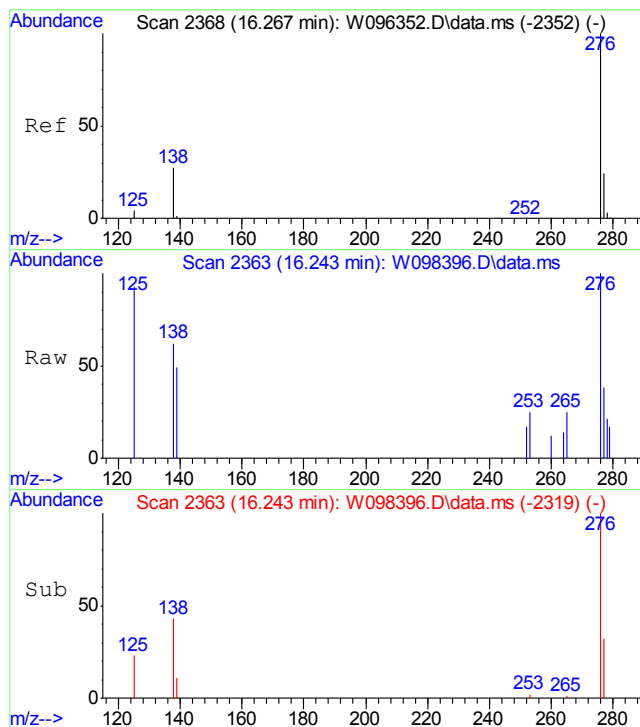
Tgt Ion	Ratio	Lower	Upper
252	100		
253	21.6	0.0	53.3
125	37.2	0.0	47.6



#29  
Indeno[1,2,3-cd]pyrene  
Concen: 0.06 ppm  
RT: 15.795 min Scan# 2272  
Delta R.T. 0.010 min  
Lab File: W098396.D  
Acq: 29 Mar 17 2:14 pm

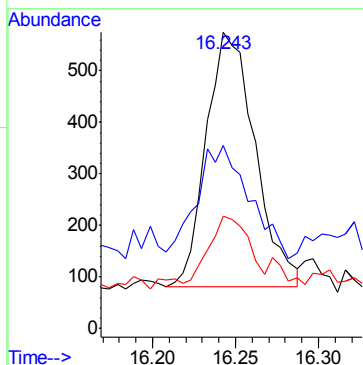
Tgt Ion	Ratio	Lower	Upper
276	100		
138	32.8	6.4	66.4
277	19.0	0.0	54.9





#31  
Benzo[g,h,i]perylene  
Concen: 0.05 ppm  
RT: 16.243 min Scan# 2363  
Delta R.T. 0.017 min  
Lab File: W098396.D  
Acq: 29 Mar 17 2:14 pm

Tgt Ion	Ratio	Lower	Upper
276	100		
138	43.7	7.9	67.9
277	25.8	0.0	55.3



7.1.6

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\SW4369\  
 Data File : W098397.D  
 Acq On : 29 Mar 2017 2:37 pm  
 Operator : fouads  
 Sample : fa42152-7 Inst : MSBNA01  
 Misc : op64367,sw4369,15.2,,,1,1,soil  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: Mar 30 08:42:30 2017  
 Quant Method : C:\msdchem\1\METHODS\simpahf.m  
 Quant Title : PAH's by 8270 SIM  
 QLast Update : Thu Mar 02 08:24:54 2017  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	5.534	136	84623	4.00	ppm	0.00
6) Acenaphthene-d10	7.080	164	45459	4.00	ppm	-0.01
13) Phenanthrene-d10	8.400	188	71065	4.00	ppm	-0.01
20) Chrysene-d12	11.184	240	62452	4.00	ppm	-0.01
25) Perylene-d12	13.627	264	55940	4.00	ppm	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	4.921	82	35624	5.90	ppm	0.00
Spiked Amount 10.000	Range 40 - 105		Recovery =	59.00%		
7) 2-Fluorobiphenyl	6.473	172	98801	7.12	ppm	-0.02
Spiked Amount 10.000	Range 43 - 107		Recovery =	71.20%		
14) 2,4,6-Tribromophenol	7.787	330	19800	15.10	ppm	-0.01
Spiked Amount 20.000	Range 42 - 108		Recovery =	75.50%		
22) Terphenyl-d14	9.875	244	80943	6.27	ppm	0.00
Spiked Amount 10.000	Range 45 - 119		Recovery =	62.70%		
Target Compounds						
19) Fluoranthene	9.497	202	3845	0.17	ppm	93
21) Pyrene	9.718	202	3491	0.13	ppm	95
23) Benzo[a]anthracene	11.169	228	1281	0.05	ppm	78
24) Chrysene	11.223	228	1781	0.08	ppm	94
26) Benzo[b]fluoranthene	12.928	252	2616	0.13	ppm	92
27) Benzo[k]fluoranthene	12.972	252	750	0.04	ppm	84
28) Benzo[a]pyrene	13.514	252	1341	0.07	ppm	91
29) Indeno[1,2,3-cd]pyrene	15.801	276	1259	0.08	ppm	90
31) Benzo[g,h,i]perylene	16.249	276	1306	0.07	ppm	95

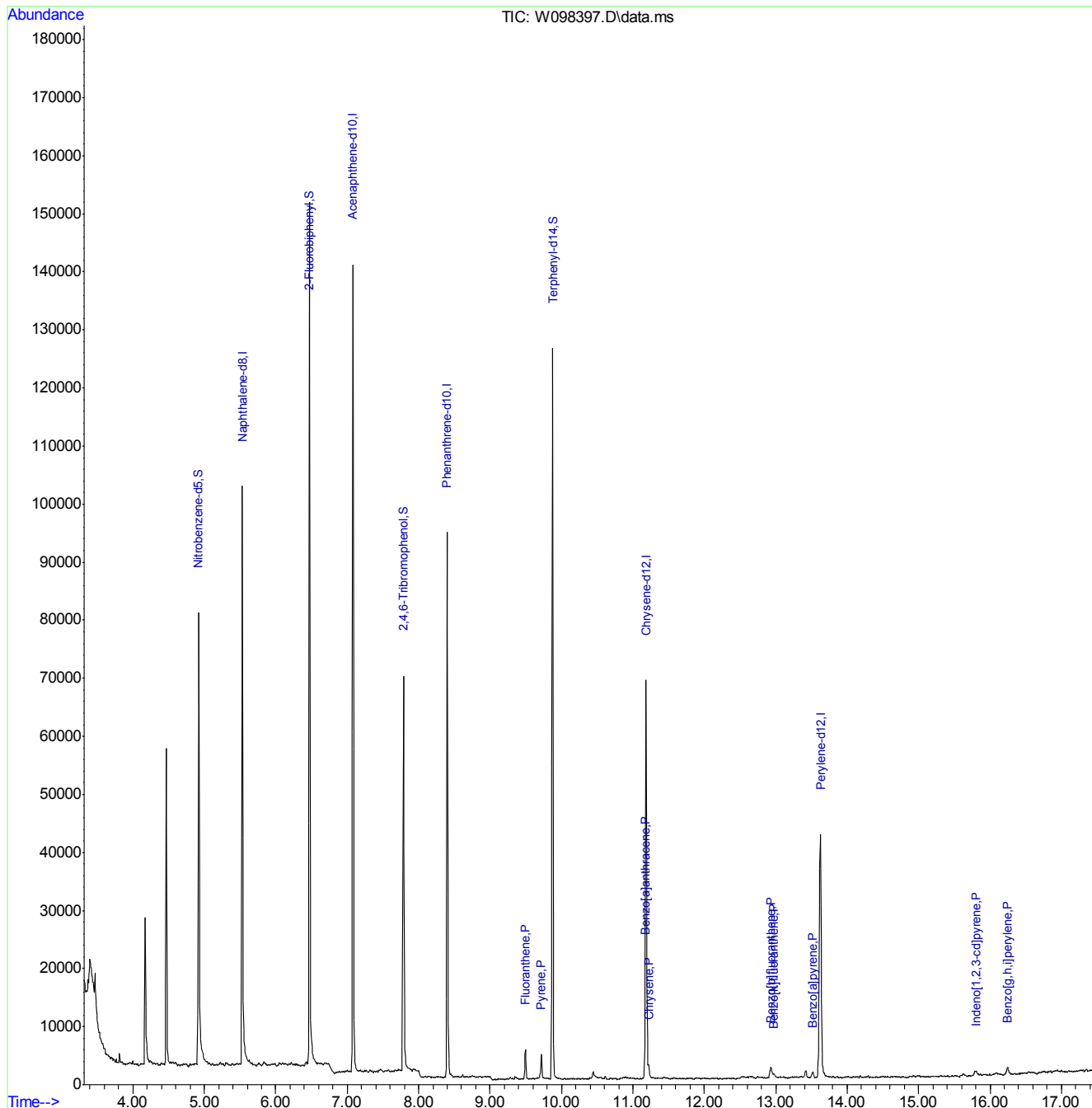
(#) = qualifier out of range (m) = manual integration (+) = signals summed

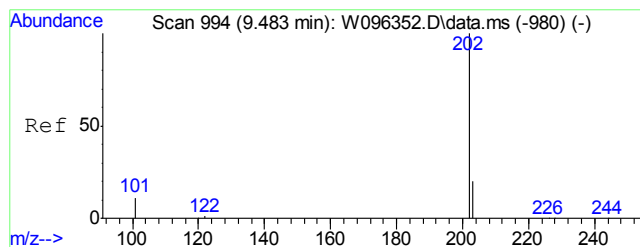
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\SW4369\  
 Data File : W098397.D  
 Acq On : 29 Mar 2017 2:37 pm  
 Operator : fouads  
 Sample : fa42152-7  
 Misc : op64367,sw4369,15.2,,,1,1,soil  
 ALS Vial : 15 Sample Multiplier: 1

Inst : MSBNA01

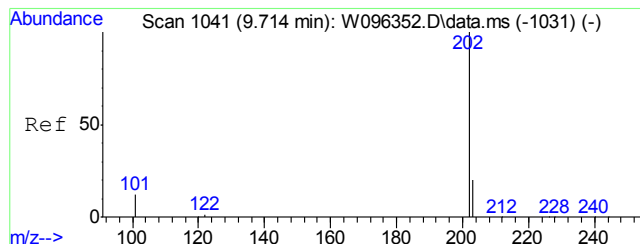
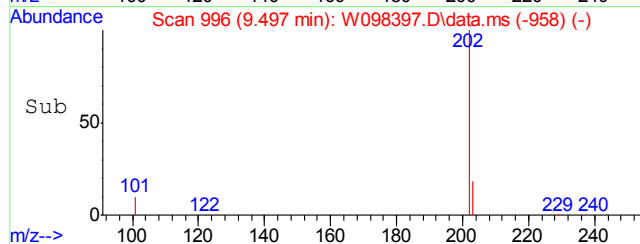
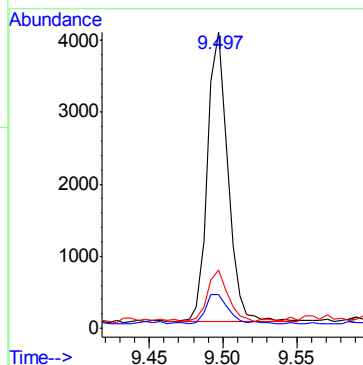
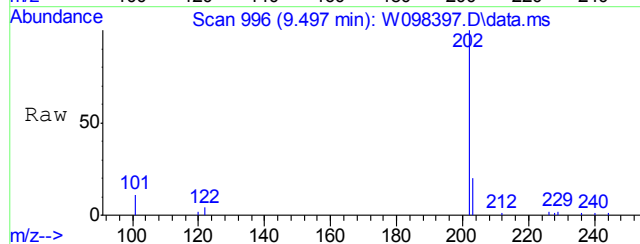
Quant Time: Mar 30 08:42:30 2017  
 Quant Method : C:\msdchem\1\METHODS\simpahf.m  
 Quant Title : PAH's by 8270 SIM  
 QLast Update : Thu Mar 02 08:24:54 2017  
 Response via : Initial Calibration





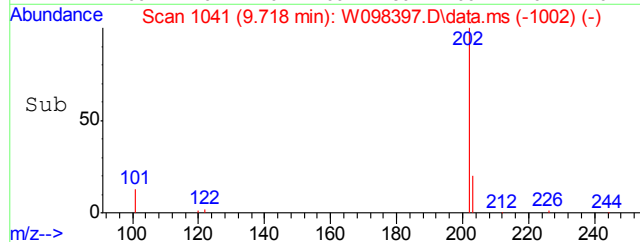
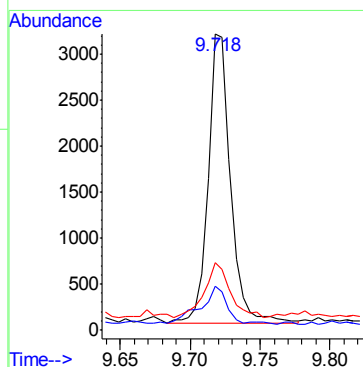
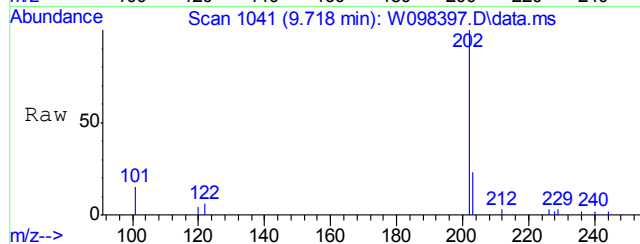
#19  
Fluoranthene  
Concen: 0.17 ppm  
RT: 9.497 min Scan# 996  
Delta R.T. -0.012 min  
Lab File: W098397.D  
Acq: 29 Mar 17 2:37 pm

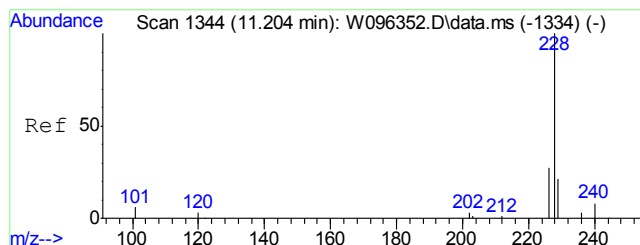
Tgt Ion	Ratio	Lower	Upper
202	100		
101	9.8	0.0	43.2
203	17.4	0.0	50.3



#21  
Pyrene  
Concen: 0.13 ppm  
RT: 9.718 min Scan# 1041  
Delta R.T. -0.009 min  
Lab File: W098397.D  
Acq: 29 Mar 17 2:37 pm

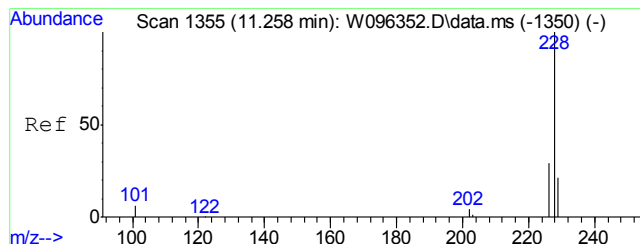
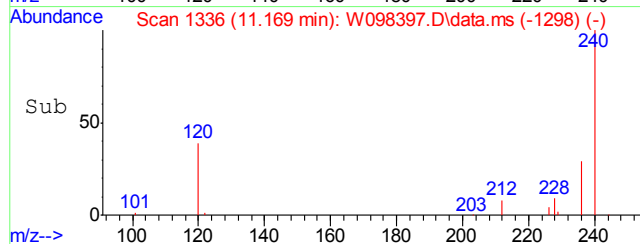
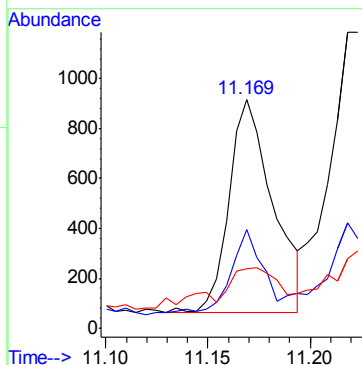
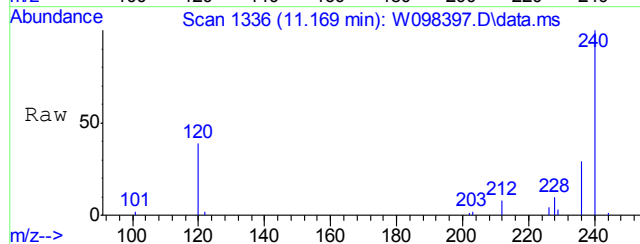
Tgt Ion	Ratio	Lower	Upper
202	100		
101	13.1	0.0	45.4
203	18.1	0.0	50.4





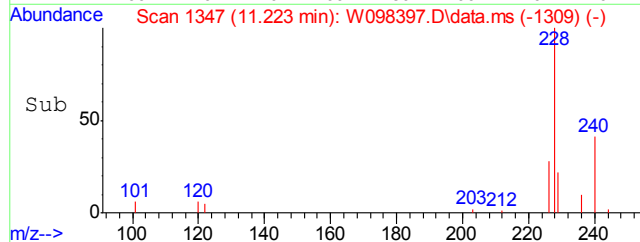
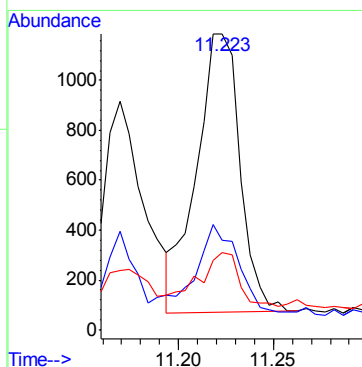
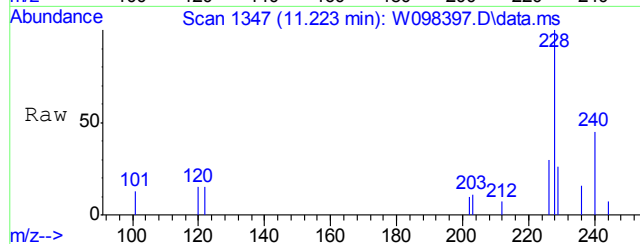
#23  
Benzo[a]anthracene  
Concen: 0.05 ppm  
RT: 11.169 min Scan# 1336  
Delta R.T. -0.015 min  
Lab File: W098397.D  
Acq: 29 Mar 17 2:37 pm

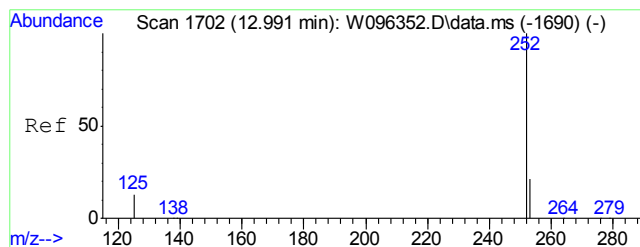
Tgt Ion	Ratio	Lower	Upper
228	100		
226	40.4	0.0	56.0
229	15.1	0.0	51.7



#24  
Chrysene  
Concen: 0.08 ppm  
RT: 11.223 min Scan# 1347  
Delta R.T. -0.015 min  
Lab File: W098397.D  
Acq: 29 Mar 17 2:37 pm

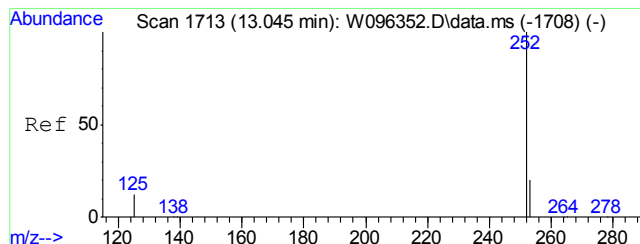
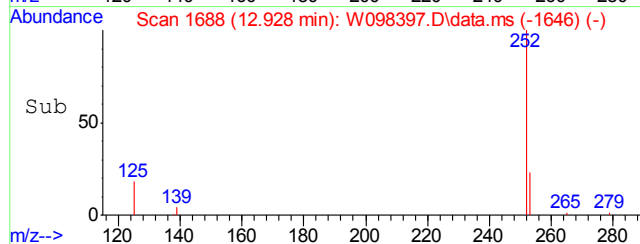
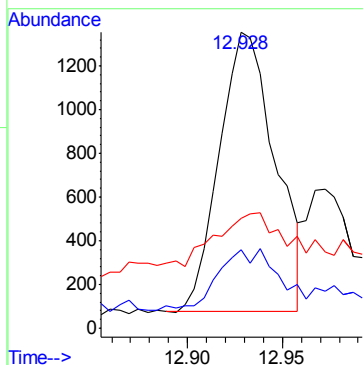
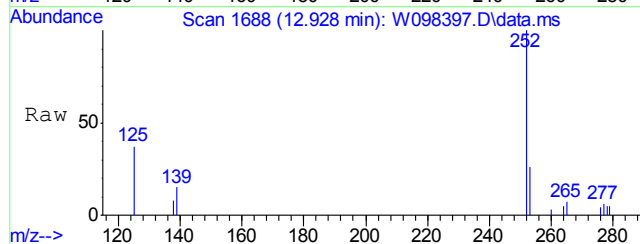
Tgt Ion	Ratio	Lower	Upper
228	100		
226	25.7	0.0	58.8
229	18.0	0.0	51.2





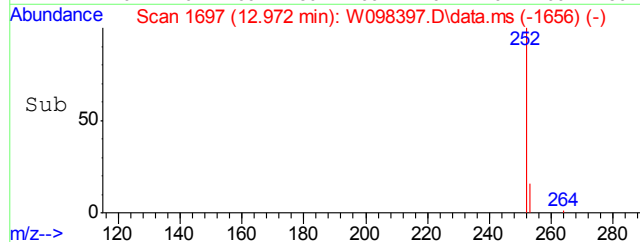
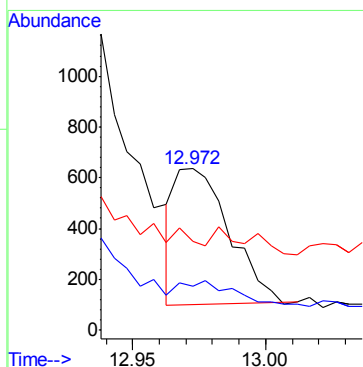
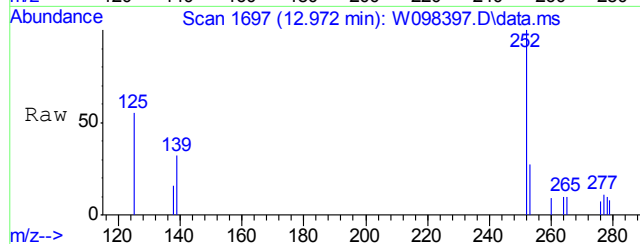
#26  
Benzo[b]fluoranthene  
Concen: 0.13 ppm  
RT: 12.928 min Scan# 1688  
Delta R.T. 0.005 min  
Lab File: W098397.D  
Acq: 29 Mar 17 2:37 pm

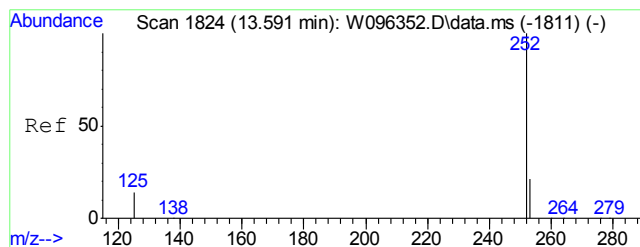
Tgt Ion	Ratio	Lower	Upper
252	100		
253	19.2	0.0	53.3
125	13.6	0.0	46.8



#27  
Benzo[k]fluoranthene  
Concen: 0.04 ppm  
RT: 12.972 min Scan# 1697  
Delta R.T. -0.000 min  
Lab File: W098397.D  
Acq: 29 Mar 17 2:37 pm

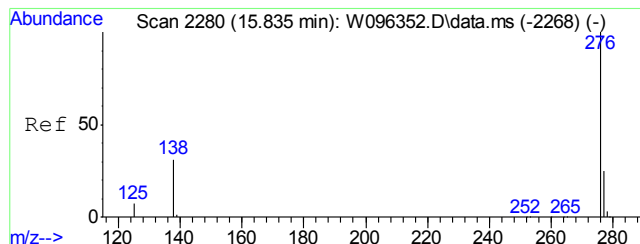
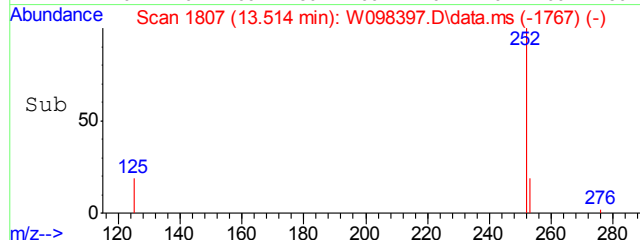
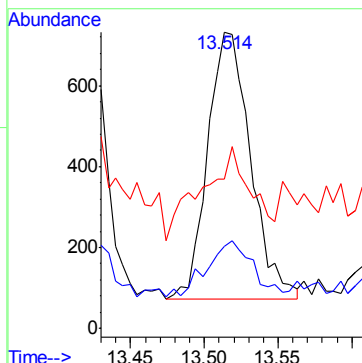
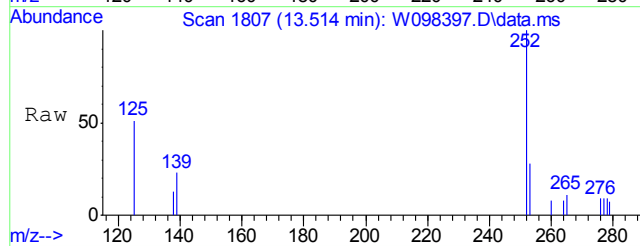
Tgt Ion	Ratio	Lower	Upper
252	100		
253	16.1	0.0	53.2
125	9.2	0.0	47.1





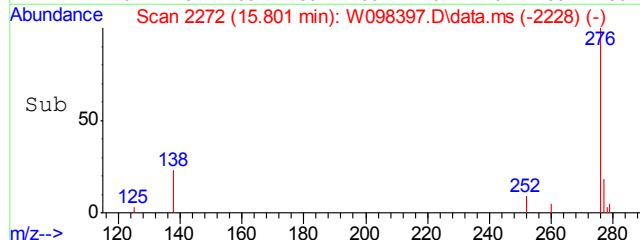
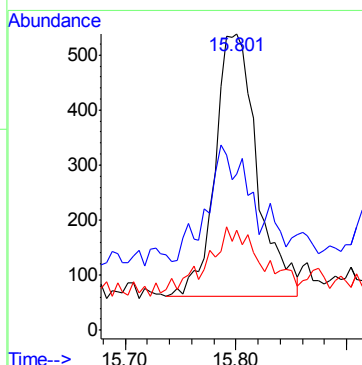
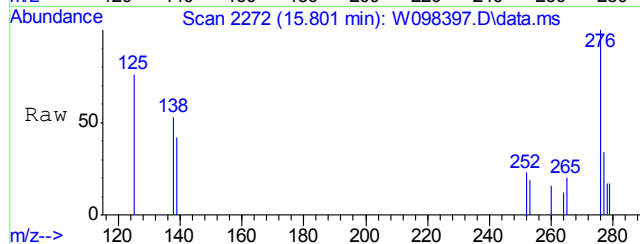
#28  
Benzo[a]pyrene  
Concen: 0.07 ppm  
RT: 13.514 min Scan# 1807  
Delta R.T. -0.005 min  
Lab File: W098397.D  
Acq: 29 Mar 17 2:37 pm

Tgt Ion	Ratio	Lower	Upper
252	100		
253	16.4	0.0	53.3
125	16.7	0.0	47.6

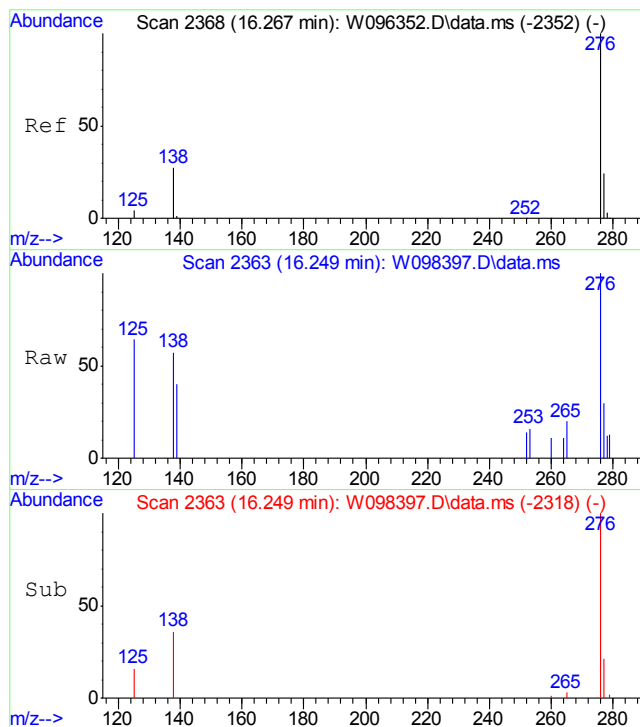


#29  
Indeno[1,2,3-cd]pyrene  
Concen: 0.08 ppm  
RT: 15.801 min Scan# 2272  
Delta R.T. 0.016 min  
Lab File: W098397.D  
Acq: 29 Mar 17 2:37 pm

Tgt Ion	Ratio	Lower	Upper
276	100		
138	28.2	6.4	66.4
277	23.0	0.0	54.9

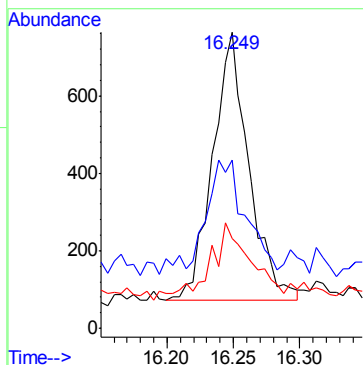






#31  
 Benzo[g,h,i]perylene  
 Concen: 0.07 ppm  
 RT: 16.249 min Scan# 2363  
 Delta R.T. 0.022 min  
 Lab File: W098397.D  
 Acq: 29 Mar 17 2:37 pm

Tgt Ion	Ratio	Lower	Upper
276	100		
138	37.2	7.9	67.9
277	20.0	0.0	55.3



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\SW4369\  
 Data File : W098398.D  
 Acq On : 29 Mar 2017 3:00 pm  
 Operator : fouads  
 Sample : fa42152-8  
 Misc : op64367,sw4369,15.0,,,1,1,soil  
 ALS Vial : 16 Sample Multiplier: 1

Inst : MSBNA01

Quant Time: Mar 30 07:50:36 2017  
 Quant Method : C:\msdchem\1\METHODS\simpahf.m  
 Quant Title : PAH's by 8270 SIM  
 QLast Update : Thu Mar 02 08:24:54 2017  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	5.534	136	81834	4.00	ppm	0.00
6) Acenaphthene-d10	7.080	164	45384	4.00	ppm	-0.01
13) Phenanthrene-d10	8.400	188	68968	4.00	ppm	-0.01
20) Chrysene-d12	11.184	240	60956	4.00	ppm	-0.01
25) Perylene-d12	13.622	264	58355	4.00	ppm	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	4.921	82	36227	6.20	ppm	0.00
Spiked Amount 10.000	Range 40 - 105		Recovery =	62.00%		
7) 2-Fluorobiphenyl	6.473	172	95725	6.91	ppm	-0.02
Spiked Amount 10.000	Range 43 - 107		Recovery =	69.10%		
14) 2,4,6-Tribromophenol	7.787	330	19511	15.33	ppm	-0.01
Spiked Amount 20.000	Range 42 - 108		Recovery =	76.65%		
22) Terphenyl-d14	9.876	244	76588	6.08	ppm	0.00
Spiked Amount 10.000	Range 45 - 119		Recovery =	60.80%		
Target Compounds						
19) Fluoranthene	9.497	202	5122	0.24	ppm	93
21) Pyrene	9.719	202	4446	0.17	ppm	93
23) Benzo[a]anthracene	11.174	228	1214	0.05	ppm	94
24) Chrysene	11.224	228	2070	0.10	ppm	95
26) Benzo[b]fluoranthene	12.928	252	3253	0.15	ppm	98
27) Benzo[k]fluoranthene	12.977	252	1046	0.05	ppm	90
28) Benzo[a]pyrene	13.514	252	1761	0.09	ppm	88
29) Indeno[1,2,3-cd]pyrene	15.796	276	1447	0.09	ppm	88
31) Benzo[g,h,i]perylene	16.249	276	1488	0.08	ppm	88

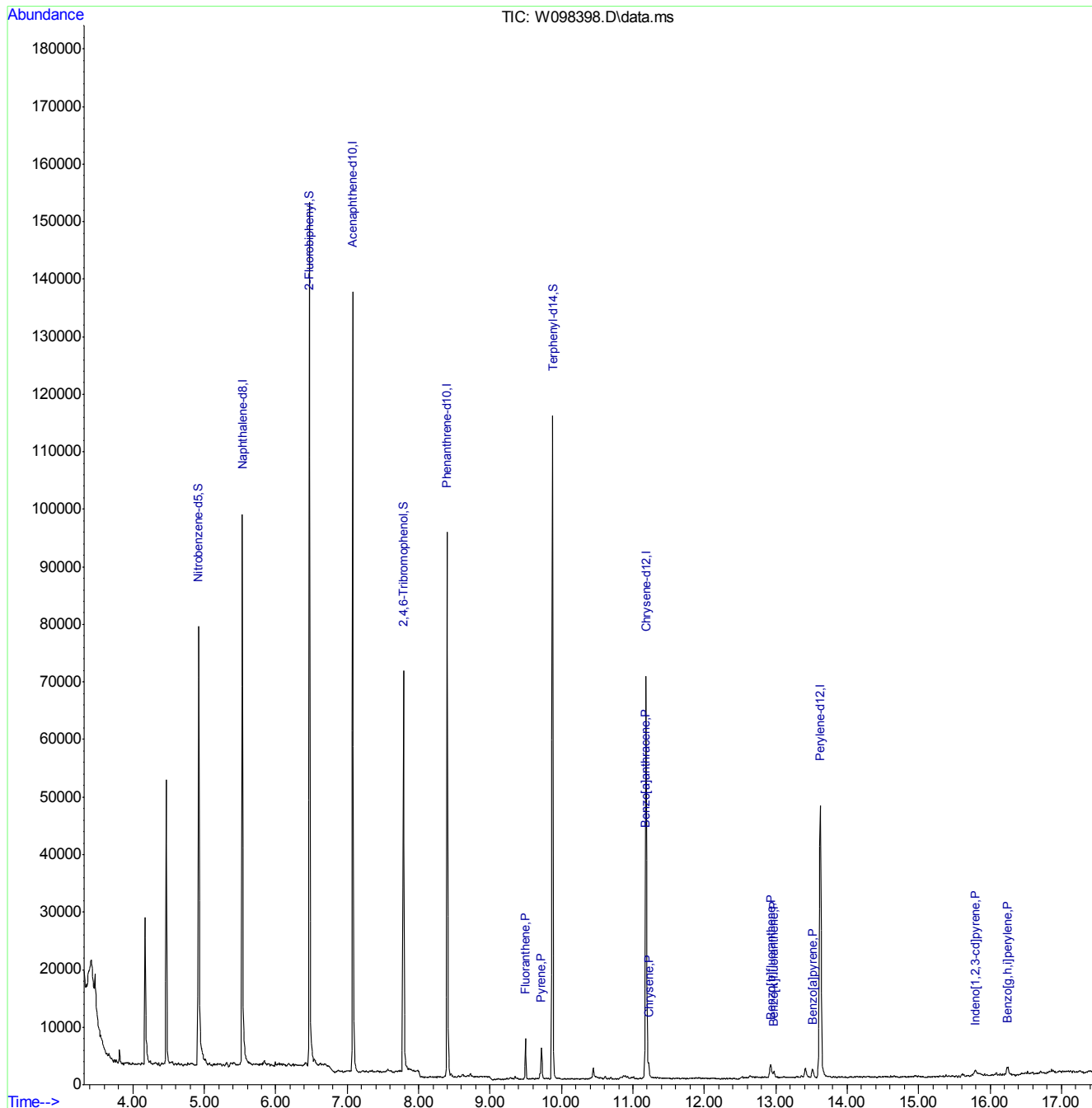
(#) = qualifier out of range (m) = manual integration (+) = signals summed

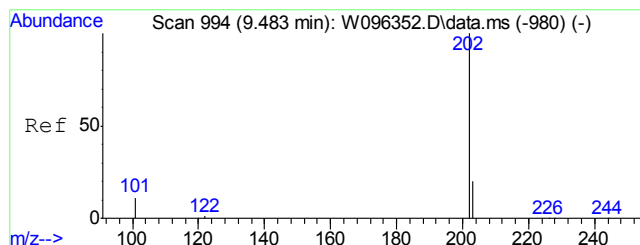
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\SW4369\  
Data File : W098398.D  
Acq On : 29 Mar 2017 3:00 pm  
Operator : fouads  
Sample : fa42152-8  
Misc : op64367,sw4369,15.0,,,1,1,soil  
ALS Vial : 16 Sample Multiplier: 1

Inst : MSBNA01

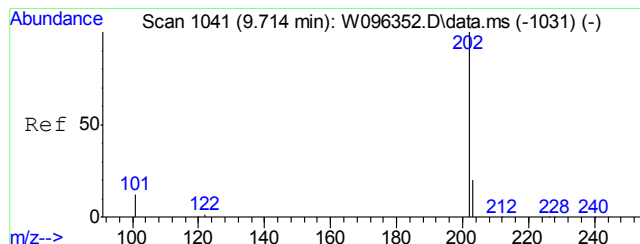
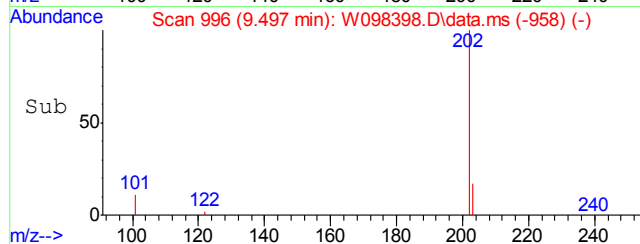
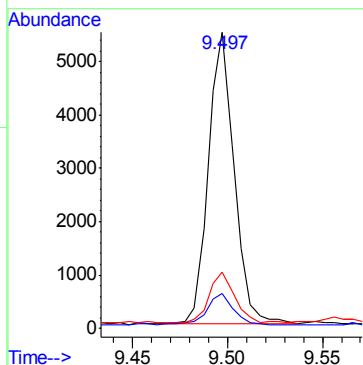
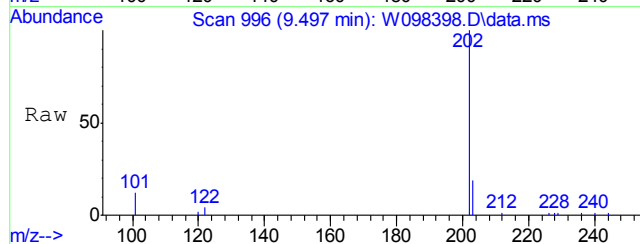
Quant Time: Mar 30 07:50:36 2017  
Quant Method : C:\msdchem\1\METHODS\simpahf.m  
Quant Title : PAH's by 8270 SIM  
QLast Update : Thu Mar 02 08:24:54 2017  
Response via : Initial Calibration





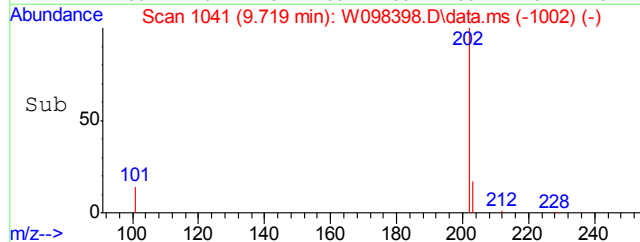
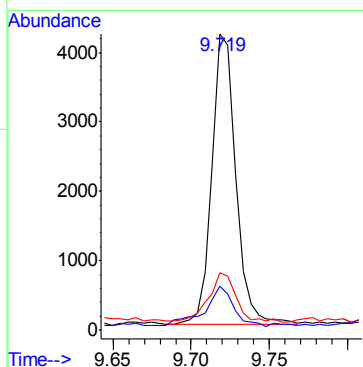
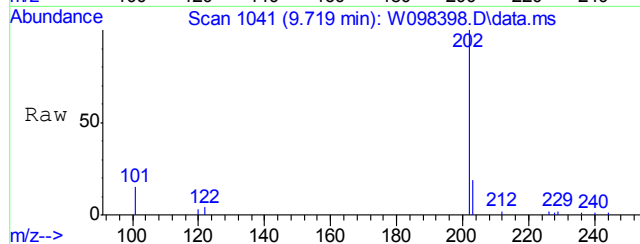
#19  
Fluoranthene  
Concen: 0.24 ppm  
RT: 9.497 min Scan# 996  
Delta R.T. -0.012 min  
Lab File: W098398.D  
Acq: 29 Mar 17 3:00 pm

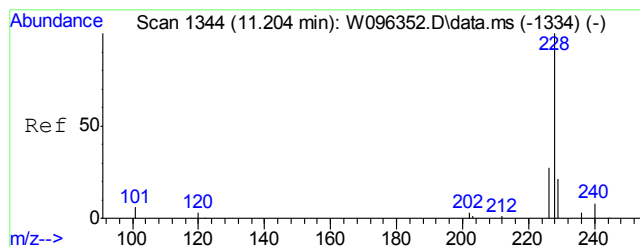
Tgt Ion	Ratio	Lower	Upper
202	100		
101	10.7	0.0	43.2
203	16.9	0.0	50.3



#21  
Pyrene  
Concen: 0.17 ppm  
RT: 9.719 min Scan# 1041  
Delta R.T. -0.008 min  
Lab File: W098398.D  
Acq: 29 Mar 17 3:00 pm

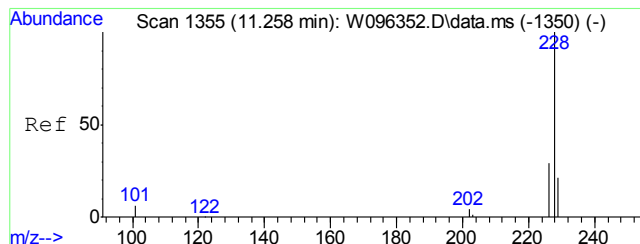
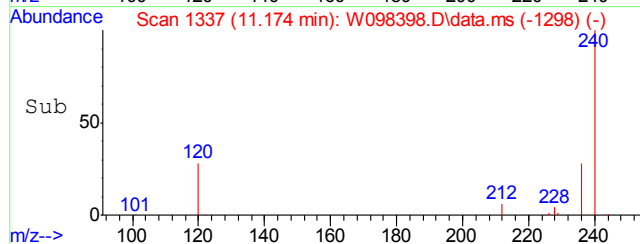
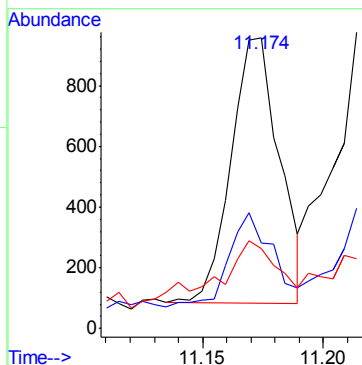
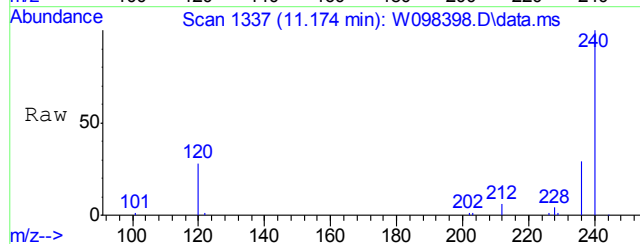
Tgt Ion	Ratio	Lower	Upper
202	100		
101	13.6	0.0	45.4
203	16.5	0.0	50.4





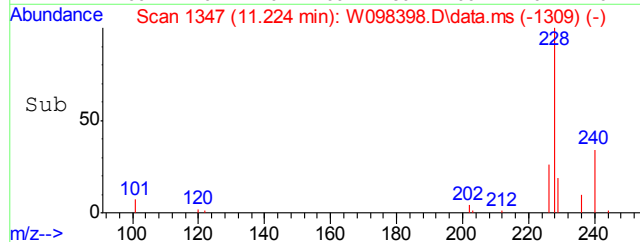
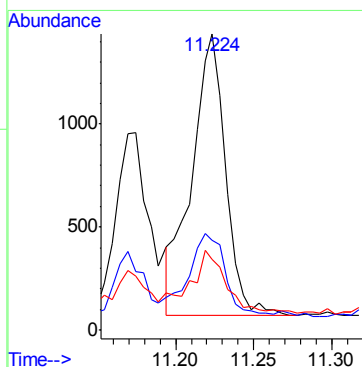
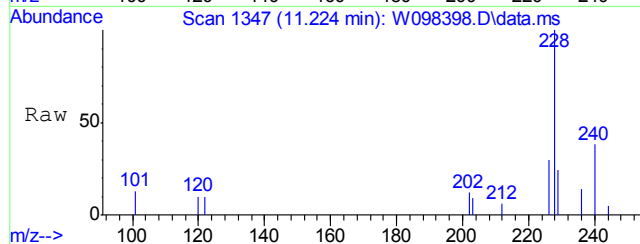
#23  
Benzo[a]anthracene  
Concen: 0.05 ppm  
RT: 11.174 min Scan# 1337  
Delta R.T. -0.009 min  
Lab File: W098398.D  
Acq: 29 Mar 17 3:00 pm

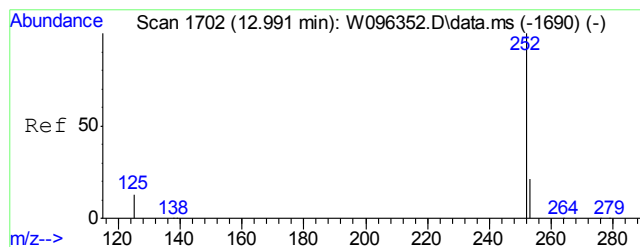
Tgt Ion	Ratio	Lower	Upper
228	100		
226	23.8	0.0	56.0
229	18.0	0.0	51.7



#24  
Chrysene  
Concen: 0.10 ppm  
RT: 11.224 min Scan# 1347  
Delta R.T. -0.014 min  
Lab File: W098398.D  
Acq: 29 Mar 17 3:00 pm

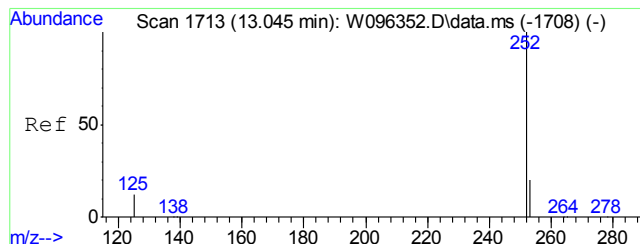
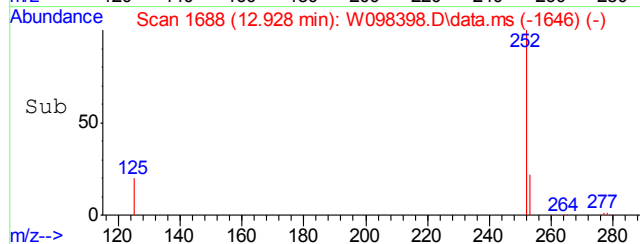
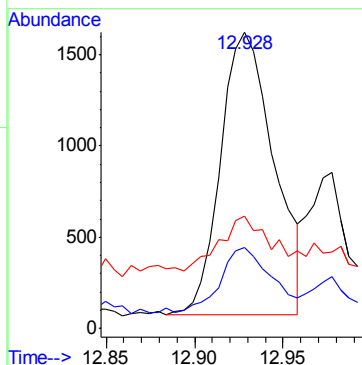
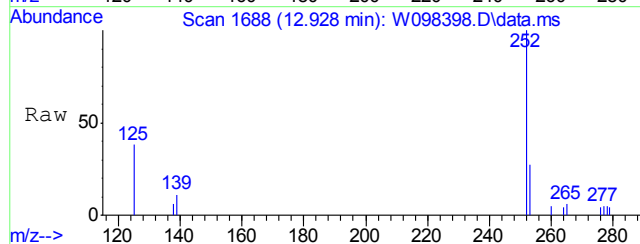
Tgt Ion	Ratio	Lower	Upper
228	100		
226	27.1	0.0	58.8
229	17.6	0.0	51.2





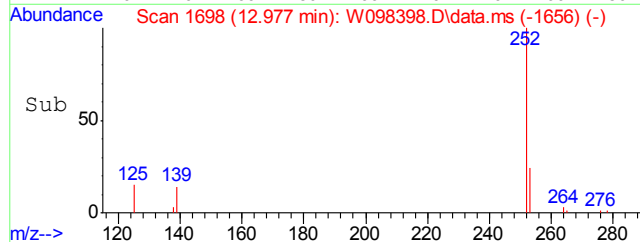
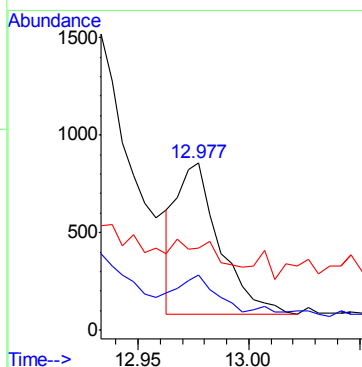
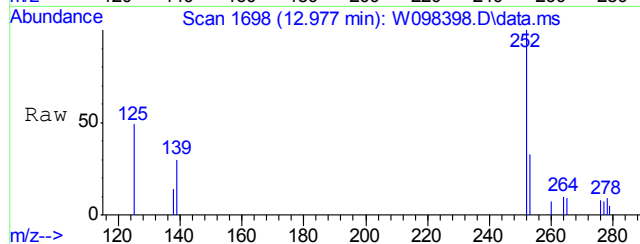
#26  
Benzo[b]fluoranthene  
Concen: 0.15 ppm  
RT: 12.928 min Scan# 1688  
Delta R.T. 0.005 min  
Lab File: W098398.D  
Acq: 29 Mar 17 3:00 pm

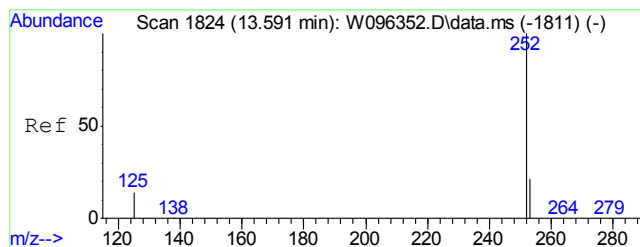
Tgt Ion:	252	Resp:	3253
Ion Ratio	100	Lower	Upper
252	100		
253	23.5	0.0	53.3
125	18.4	0.0	46.8



#27  
Benzo[k]fluoranthene  
Concen: 0.05 ppm  
RT: 12.977 min Scan# 1698  
Delta R.T. 0.005 min  
Lab File: W098398.D  
Acq: 29 Mar 17 3:00 pm

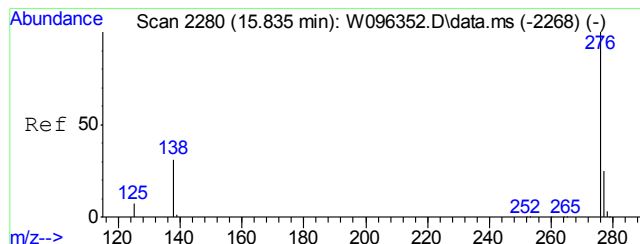
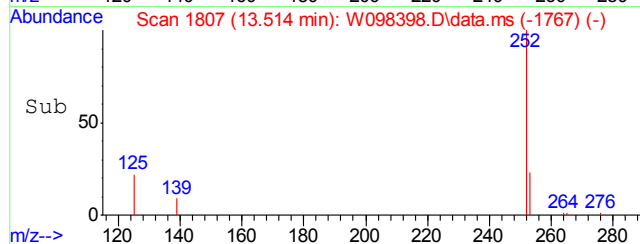
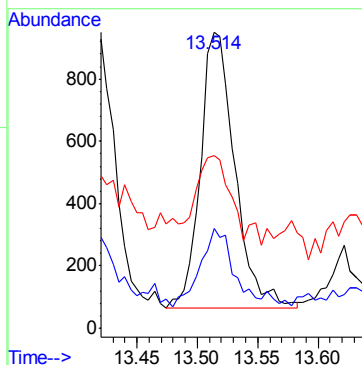
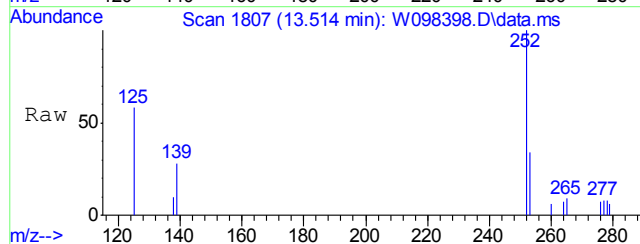
Tgt Ion:	252	Resp:	1046
Ion Ratio	100	Lower	Upper
252	100		
253	26.8	0.0	53.2
125	11.5	0.0	47.1





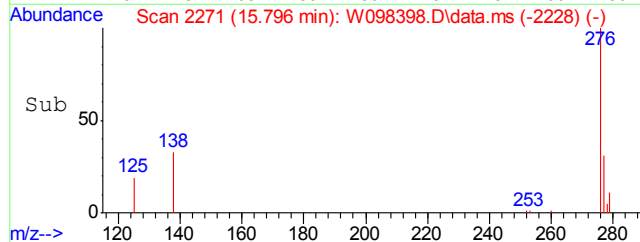
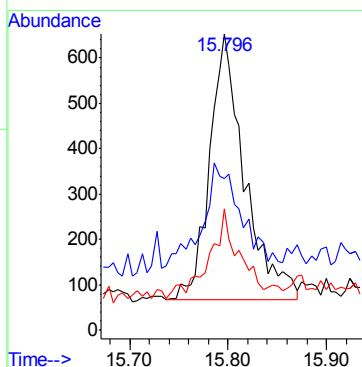
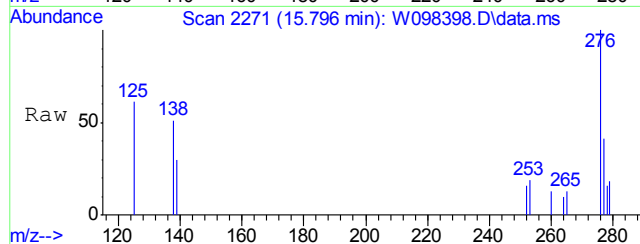
#28  
Benzo[a]pyrene  
Concen: 0.09 ppm  
RT: 13.514 min Scan# 1807  
Delta R.T. -0.005 min  
Lab File: W098398.D  
Acq: 29 Mar 17 3:00 pm

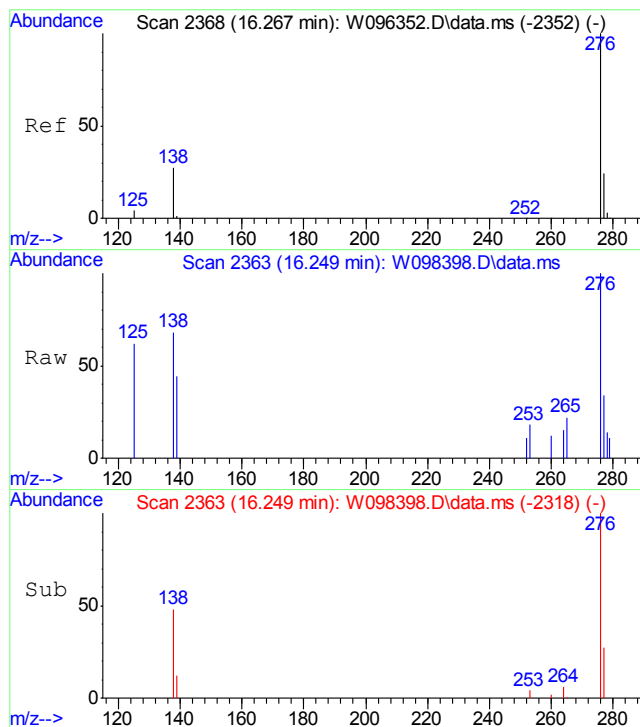
Tgt Ion	Ratio	Lower	Upper
252	100		
253	25.5	0.0	53.3
125	26.8	0.0	47.6



#29  
Indeno[1,2,3-cd]pyrene  
Concen: 0.09 ppm  
RT: 15.796 min Scan# 2271  
Delta R.T. 0.011 min  
Lab File: W098398.D  
Acq: 29 Mar 17 3:00 pm

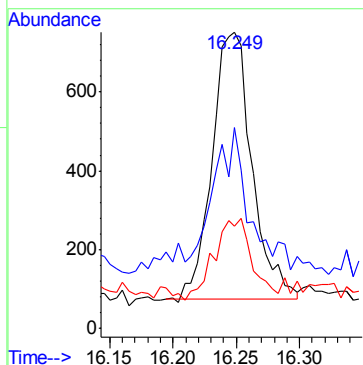
Tgt Ion	Ratio	Lower	Upper
276	100		
138	29.1	6.4	66.4
277	30.1	0.0	54.9





#31  
 Benzo[g,h,i]perylene  
 Concen: 0.08 ppm  
 RT: 16.249 min Scan# 2363  
 Delta R.T. 0.023 min  
 Lab File: W098398.D  
 Acq: 29 Mar 17 3:00 pm

Tgt Ion:	276	Resp:	1488
Ion Ratio	Lower	Upper	
276	100		
138	47.9	7.9	67.9
277	22.1	0.0	55.3



7.1.8



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\SW4369\  
 Data File : W098401.D  
 Acq On : 29 Mar 2017 4:10 pm  
 Operator : fouads  
 Sample : fa42152-9 Inst : MSBNA01  
 Misc : op64367,sw4369,15.0,,,1,1,soil  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: Mar 30 07:54:23 2017  
 Quant Method : C:\msdchem\1\METHODS\simpahf.m  
 Quant Title : PAH's by 8270 SIM  
 QLast Update : Thu Mar 02 08:24:54 2017  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	5.535	136	79338	4.00	ppm	0.00
6) Acenaphthene-d10	7.080	164	42898	4.00	ppm	-0.01
13) Phenanthrene-d10	8.399	188	66620	4.00	ppm	-0.01
20) Chrysene-d12	11.183	240	57335	4.00	ppm	-0.02
25) Perylene-d12	13.622	264	54546	4.00	ppm	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	4.922	82	34991	6.18	ppm	0.00
Spiked Amount 10.000	Range 40 - 105		Recovery =	61.80%		
7) 2-Fluorobiphenyl	6.473	172	91448	6.98	ppm	-0.02
Spiked Amount 10.000	Range 43 - 107		Recovery =	69.80%		
14) 2,4,6-Tribromophenol	7.786	330	18853	15.33	ppm	-0.01
Spiked Amount 20.000	Range 42 - 108		Recovery =	76.65%		
22) Terphenyl-d14	9.875	244	72866	6.15	ppm	0.00
Spiked Amount 10.000	Range 45 - 119		Recovery =	61.50%		
Target Compounds						
19) Fluoranthene	9.496	202	2518	0.12	ppm	95
21) Pyrene	9.722	202	2198	0.09	ppm	91
23) Benzo[a]anthracene	11.168	228	886	0.04	ppm	86
24) Chrysene	11.222	228	1349	0.07	ppm	95
26) Benzo[b]fluoranthene	12.929	252	2472	0.12	ppm	99
28) Benzo[a]pyrene	13.514	252	1264	0.07	ppm	90
29) Indeno[1,2,3-cd]pyrene	15.801	276	1084	0.07	ppm	87
31) Benzo[g,h,i]perylene	16.239	276	2300	0.13	ppm	99

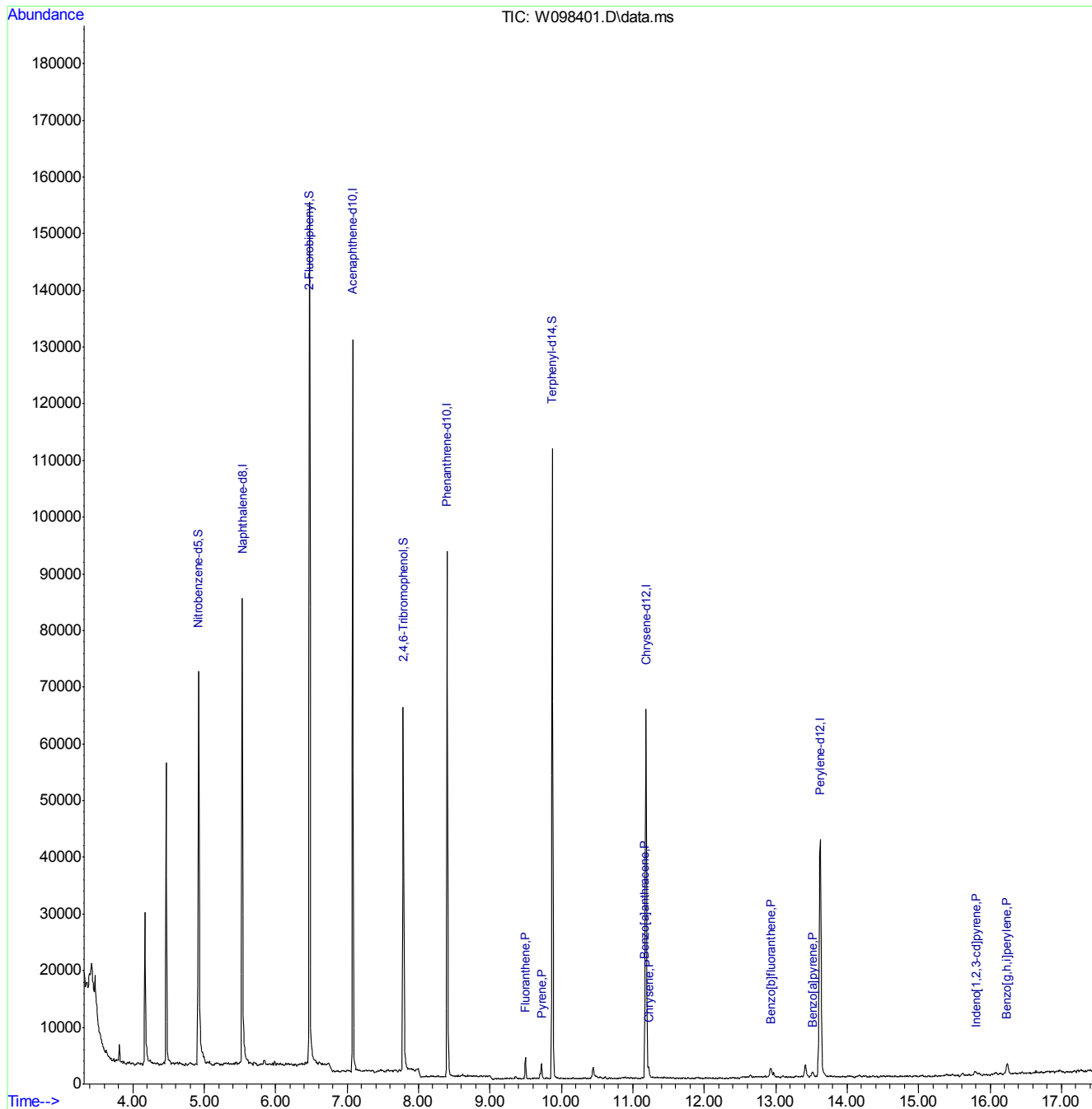
(#) = qualifier out of range (m) = manual integration (+) = signals summed

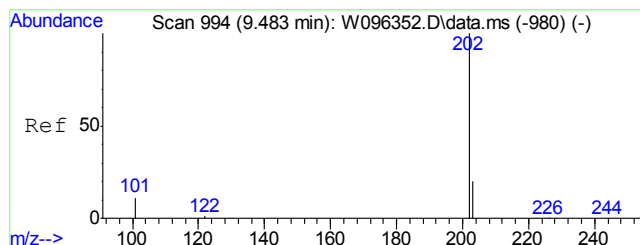
## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\SW4369\  
Data File : W098401.D  
Acq On : 29 Mar 2017 4:10 pm  
Operator : fouads  
Sample : fa42152-9  
Misc : op64367,sw4369,15.0,,,1,1,soil  
ALS Vial : 19 Sample Multiplier: 1

Inst : MSBNA01

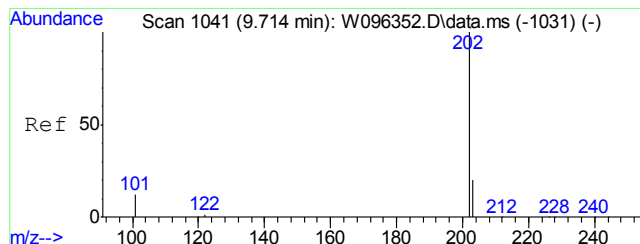
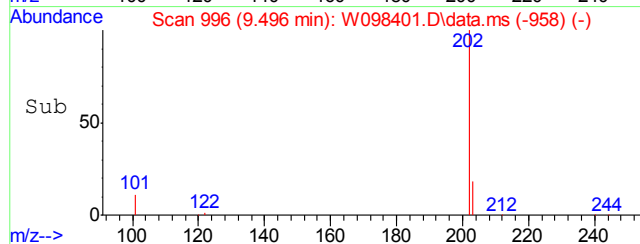
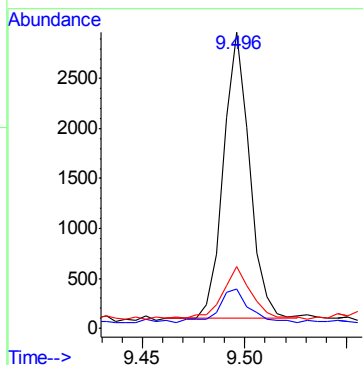
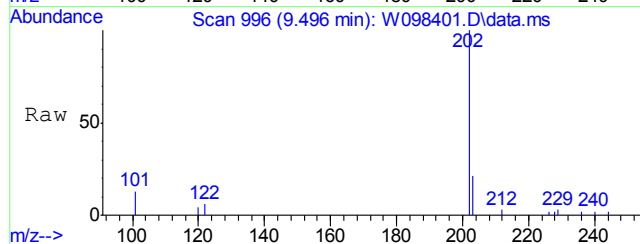
Quant Time: Mar 30 07:54:23 2017  
Quant Method : C:\msdchem\1\METHODS\simpahf.m  
Quant Title : PAH's by 8270 SIM  
QLast Update : Thu Mar 02 08:24:54 2017  
Response via : Initial Calibration





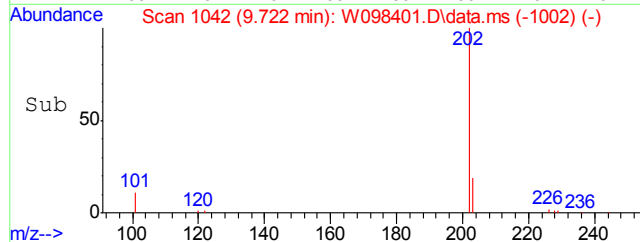
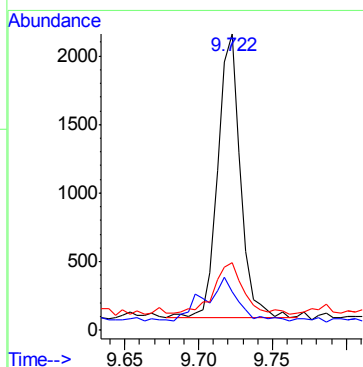
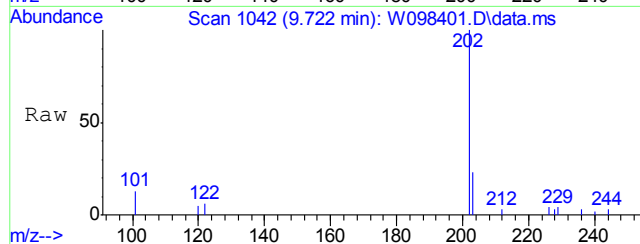
#19  
Fluoranthene  
Concen: 0.12 ppm  
RT: 9.496 min Scan# 996  
Delta R.T. -0.013 min  
Lab File: W098401.D  
Acq: 29 Mar 17 4:10 pm

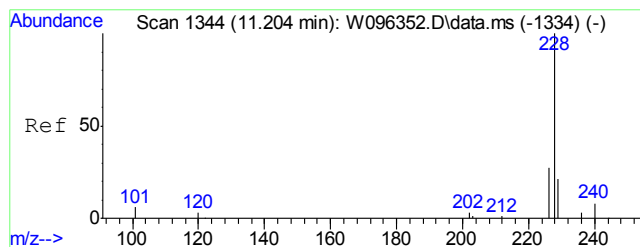
Tgt Ion	Ratio	Lower	Upper
202	100		
101	11.7	0.0	43.2
203	17.8	0.0	50.3



#21  
Pyrene  
Concen: 0.09 ppm  
RT: 9.722 min Scan# 1042  
Delta R.T. -0.004 min  
Lab File: W098401.D  
Acq: 29 Mar 17 4:10 pm

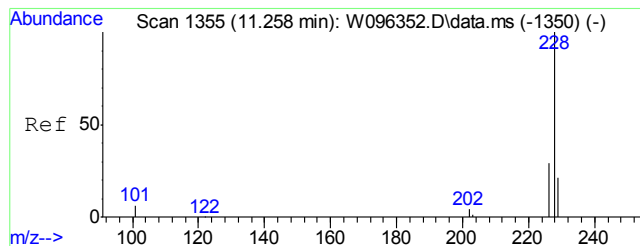
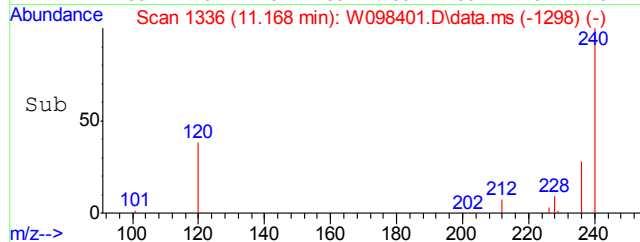
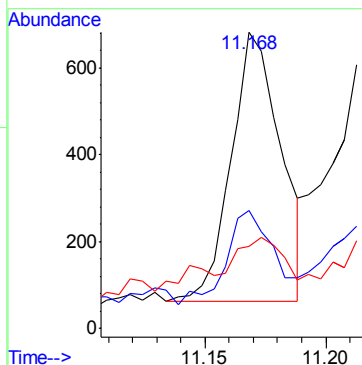
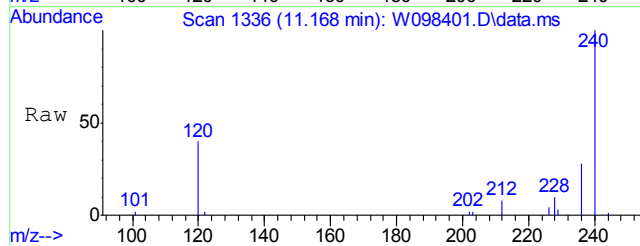
Tgt Ion	Ratio	Lower	Upper
202	100		
101	9.9	0.0	45.4
203	18.0	0.0	50.4





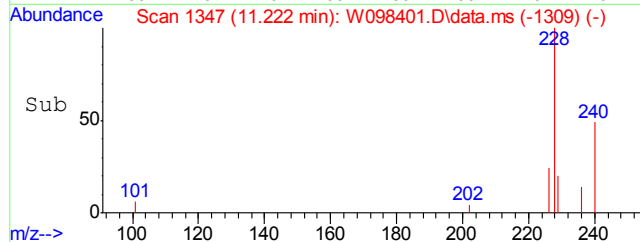
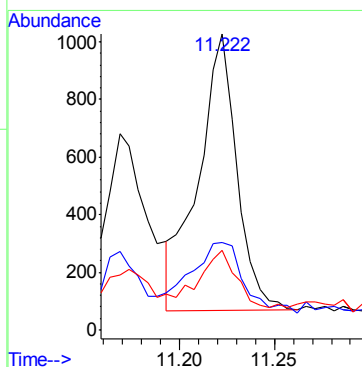
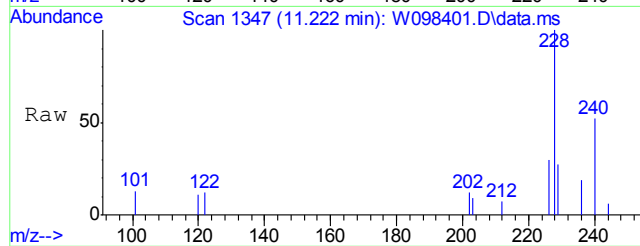
#23  
Benzo[a]anthracene  
Concen: 0.04 ppm  
RT: 11.168 min Scan# 1336  
Delta R.T. -0.015 min  
Lab File: W098401.D  
Acq: 29 Mar 17 4:10 pm

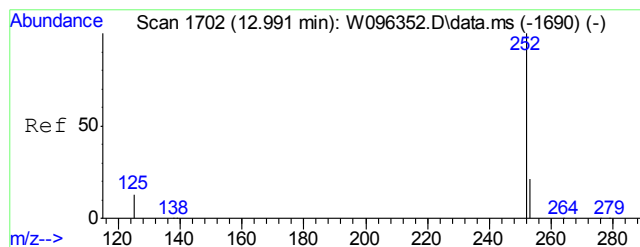
Tgt Ion	Ratio	Lower	Upper
228	100		
226	33.9	0.0	56.0
229	15.7	0.0	51.7



#24  
Chrysene  
Concen: 0.07 ppm  
RT: 11.222 min Scan# 1347  
Delta R.T. -0.015 min  
Lab File: W098401.D  
Acq: 29 Mar 17 4:10 pm

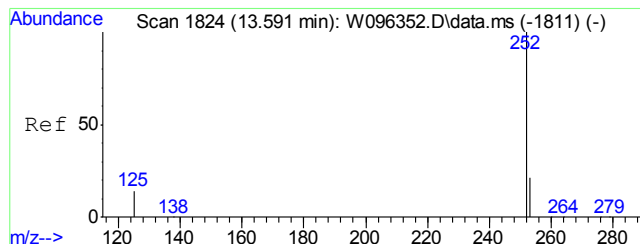
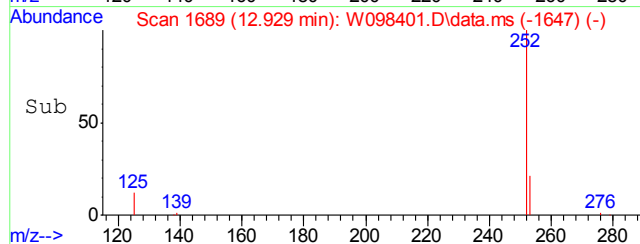
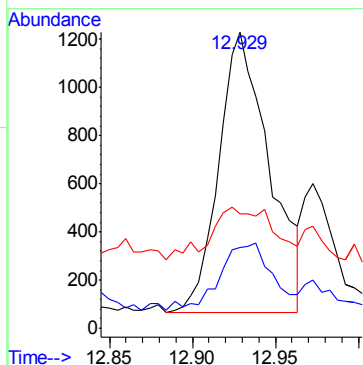
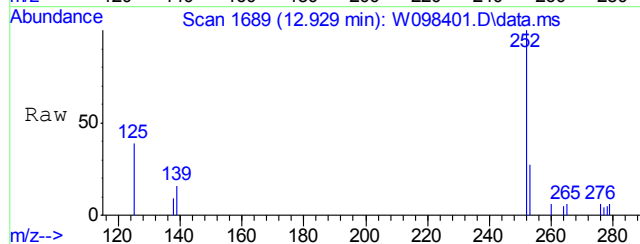
Tgt Ion	Ratio	Lower	Upper
228	100		
226	25.0	0.0	58.8
229	20.2	0.0	51.2





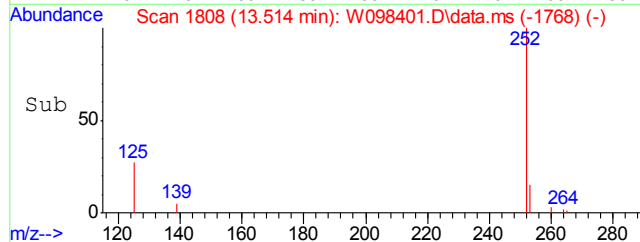
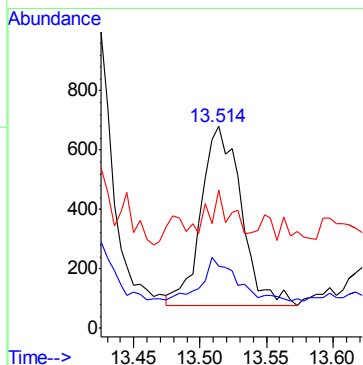
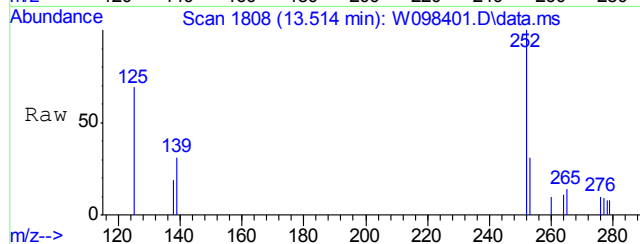
#26  
Benzo[b]fluoranthene  
Concen: 0.12 ppm  
RT: 12.929 min Scan# 1689  
Delta R.T. 0.005 min  
Lab File: W098401.D  
Acq: 29 Mar 17 4:10 pm

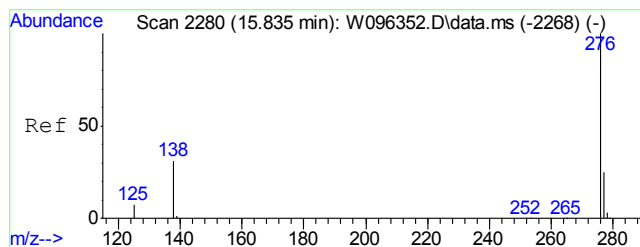
Tgt Ion	Ratio	Lower	Upper
252	100		
253	22.9	0.0	53.3
125	16.4	0.0	46.8



#28  
Benzo[a]pyrene  
Concen: 0.07 ppm  
RT: 13.514 min Scan# 1808  
Delta R.T. -0.004 min  
Lab File: W098401.D  
Acq: 29 Mar 17 4:10 pm

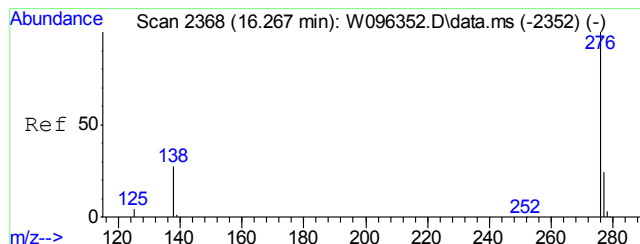
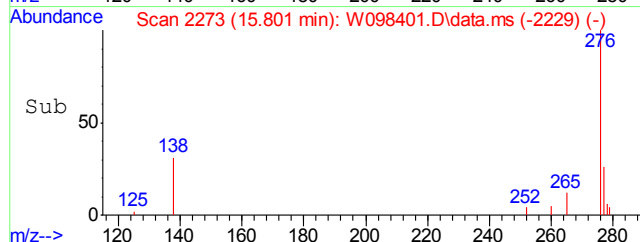
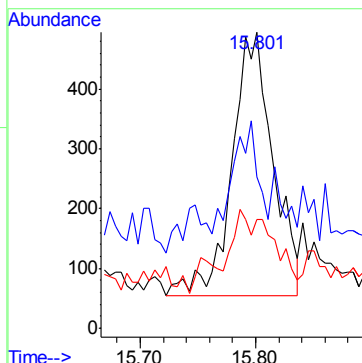
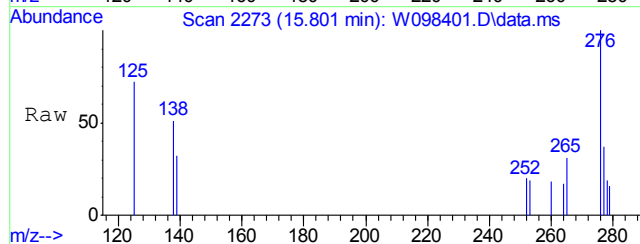
Tgt Ion	Ratio	Lower	Upper
252	100		
253	19.3	0.0	53.3
125	22.5	0.0	47.6





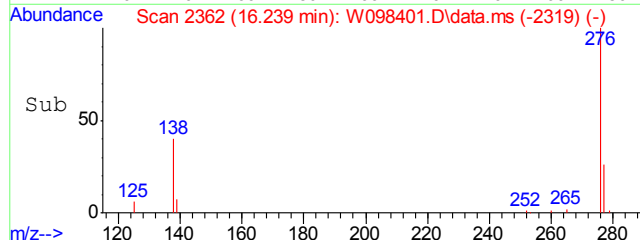
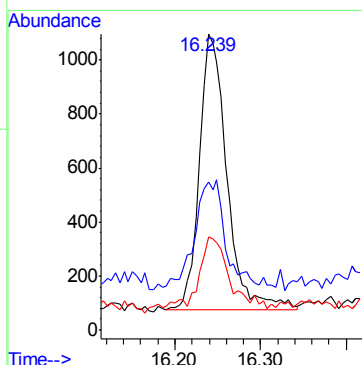
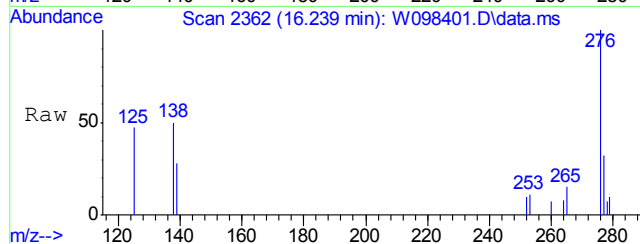
#29  
 Indeno[1,2,3-cd]pyrene  
 Concen: 0.07 ppm  
 RT: 15.801 min Scan# 2273  
 Delta R.T. 0.017 min  
 Lab File: W098401.D  
 Acq: 29 Mar 17 4:10 pm

Tgt Ion: 276 Resp: 1084  
 Ion Ratio Lower Upper  
 276 100  
 138 26.1 6.4 66.4  
 277 21.7 0.0 54.9



#31  
 Benzo[g,h,i]perylene  
 Concen: 0.13 ppm  
 RT: 16.239 min Scan# 2362  
 Delta R.T. 0.013 min  
 Lab File: W098401.D  
 Acq: 29 Mar 17 4:10 pm

Tgt Ion: 276 Resp: 2300  
 Ion Ratio Lower Upper  
 276 100  
 138 37.0 7.9 67.9  
 277 25.1 0.0 55.3



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\SW4369\  
 Data File : W098389.D  
 Acq On : 29 Mar 2017 11:35 am  
 Operator : fouads  
 Sample : op64367-mb Inst : MSBNA01  
 Misc : op64367,sw4369,15.0,,,1,1,soil  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 29 14:38:58 2017  
 Quant Method : C:\msdchem\1\METHODS\simpahf.m  
 Quant Title : PAH's by 8270 SIM  
 QLast Update : Thu Mar 02 08:24:54 2017  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	5.531	136	87052	4.00	ppm	-0.01
6) Acenaphthene-d10	7.080	164	48874	4.00	ppm	-0.01
13) Phenanthrene-d10	8.401	188	73943	4.00	ppm	-0.01
20) Chrysene-d12	11.188	240	65969	4.00	ppm	-0.01
25) Perylene-d12	13.626	264	61647	4.00	ppm	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	4.918	82	43828	7.05	ppm	-0.01
Spiked Amount 10.000	Range 40 - 105		Recovery =	70.50%		
7) 2-Fluorobiphenyl	6.476	172	116483	7.84	ppm	-0.02
Spiked Amount 10.000	Range 43 - 107		Recovery =	78.40%		
14) 2,4,6-Tribromophenol	7.786	330	21706	15.90	ppm	-0.01
Spiked Amount 20.000	Range 42 - 108		Recovery =	79.50%		
22) Terphenyl-d14	9.875	244	82948	6.08	ppm	0.00
Spiked Amount 10.000	Range 45 - 119		Recovery =	60.80%		

Target Compounds	Qvalue
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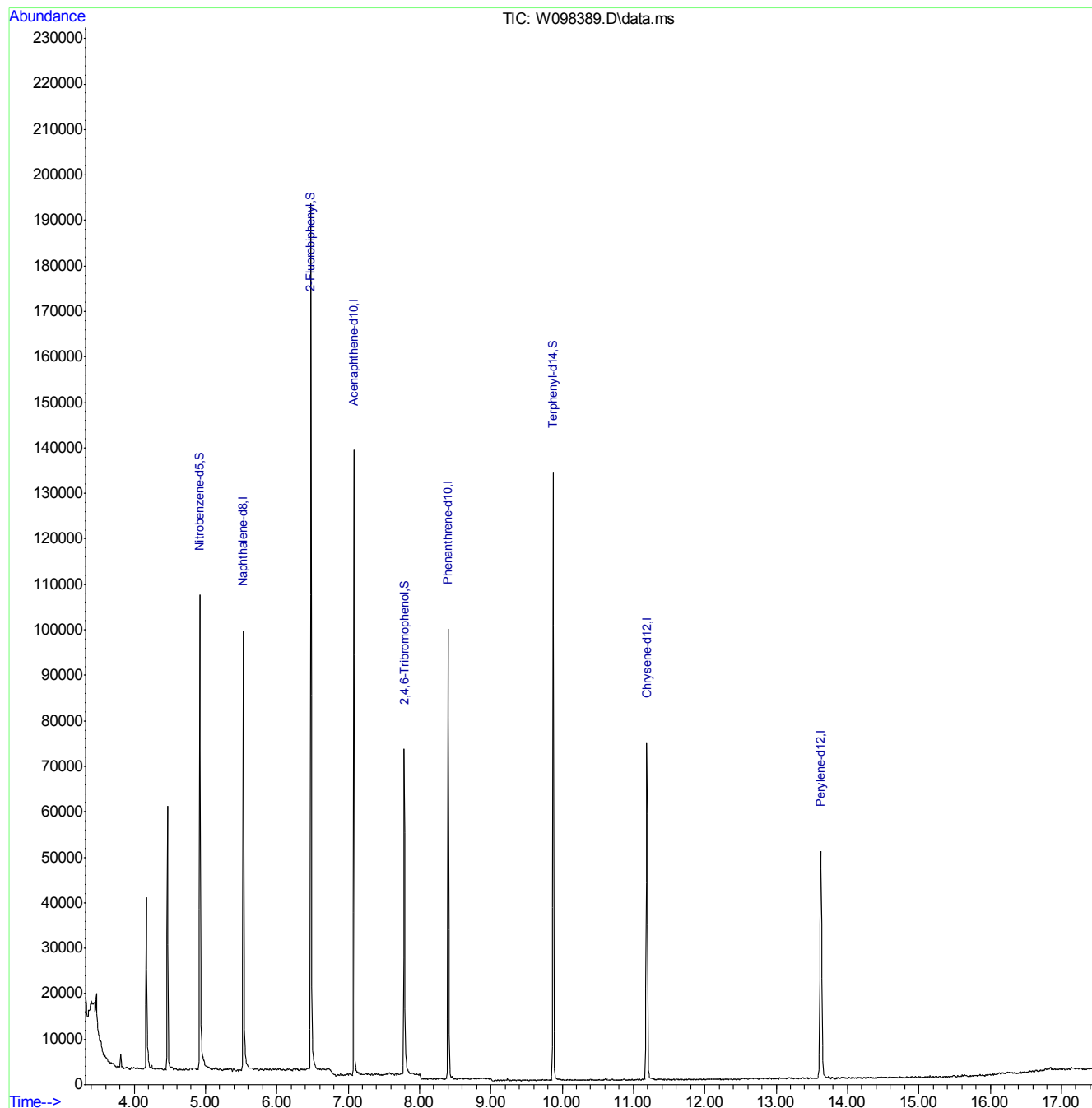
(#) = qualifier out of range (m) = manual integration (+) = signals summed

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\SW4369\  
Data File : W098389.D  
Acq On : 29 Mar 2017 11:35 am  
Operator : fouads  
Sample : op64367-mb  
Misc : op64367,sw4369,15.0,,,1,1,soil  
ALS Vial : 7 Sample Multiplier: 1

Inst : MSBNA01

Quant Time: Mar 29 14:38:58 2017  
Quant Method : C:\msdchem\1\METHODS\simpahf.m  
Quant Title : PAH's by 8270 SIM  
QLast Update : Thu Mar 02 08:24:54 2017  
Response via : Initial Calibration





## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\SW4369\  
 Data File : W098390.D  
 Acq On : 29 Mar 2017 11:57 am  
 Operator : fouads  
 Sample : op64367-bs  
 Misc : op64367,sw4369,15.0,,,1,1,soil  
 ALS Vial : 8 Sample Multiplier: 1

Inst : MSBNA01

Quant Time: Mar 29 14:39:00 2017  
 Quant Method : C:\msdchem\1\METHODS\simpahf.m  
 Quant Title : PAH's by 8270 SIM  
 QLast Update : Thu Mar 02 08:24:54 2017  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	5.534	136	101119	4.00	ppm	0.00
6) Acenaphthene-d10	7.080	164	52060	4.00	ppm	-0.01
13) Phenanthrene-d10	8.405	188	78631	4.00	ppm	0.00
20) Chrysene-d12	11.189	240	65021	4.00	ppm	0.00
25) Perylene-d12	13.627	264	64640	4.00	ppm	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	4.921	82	48419	6.71	ppm	0.00
Spiked Amount 10.000	Range 40 - 105		Recovery =	67.10%		
7) 2-Fluorobiphenyl	6.473	172	125148	7.91	ppm	-0.02
Spiked Amount 10.000	Range 43 - 107		Recovery =	79.10%		
14) 2,4,6-Tribromophenol	7.787	330	22092	15.22	ppm	-0.01
Spiked Amount 20.000	Range 42 - 108		Recovery =	76.10%		
22) Terphenyl-d14	9.876	244	87606	6.52	ppm	0.00
Spiked Amount 10.000	Range 45 - 119		Recovery =	65.20%		
Target Compounds						
					Qvalue	
3) Naphthalene	5.553	128	136832	5.58	ppm	99
4) 2-Methylnaphthalene	6.153	142	99319	5.51	ppm	89
5) 1-Methylnaphthalene	6.245	142	96670	5.87	ppm	92
9) Acenaphthylene	6.956	152	160088	6.54	ppm	100
10) Acenaphthene	7.108	153	87127	6.10	ppm	98
11) Dibenzofuran	7.267	168	129238	6.77	ppm	95
12) Fluorene	7.572	166	112330	6.67	ppm	99
15) Pentachlorophenol	8.238	266	28472	14.12	ppm	96
16) Phenanthrene	8.425	178	140226	6.30	ppm	99
17) Anthracene	8.469	178	71159	2.92	ppm	99
18) Carbazole	8.617	167	80512	3.44	ppm	98
19) Fluoranthene	9.497	202	175465	7.30	ppm	97
21) Pyrene	9.718	202	174031	6.06	ppm	98
23) Benzo[a]anthracene	11.169	228	83411	3.30	ppm	99
24) Chrysene	11.223	228	77999	3.47	ppm	99
26) Benzo[b]fluoranthene	12.924	252	81617	3.40	ppm	99
27) Benzo[k]fluoranthene	12.973	252	74650	3.23	ppm	98
28) Benzo[a]pyrene	13.519	252	70467	3.08	ppm	99
29) Indeno[1,2,3-cd]pyrene	15.797	276	60486	3.21	ppm	95
30) Dibenz[a,h]anthracene	15.856	278	54391	3.03	ppm	98
31) Benzo[g,h,i]perylene	16.249	276	65253	3.07	ppm	96

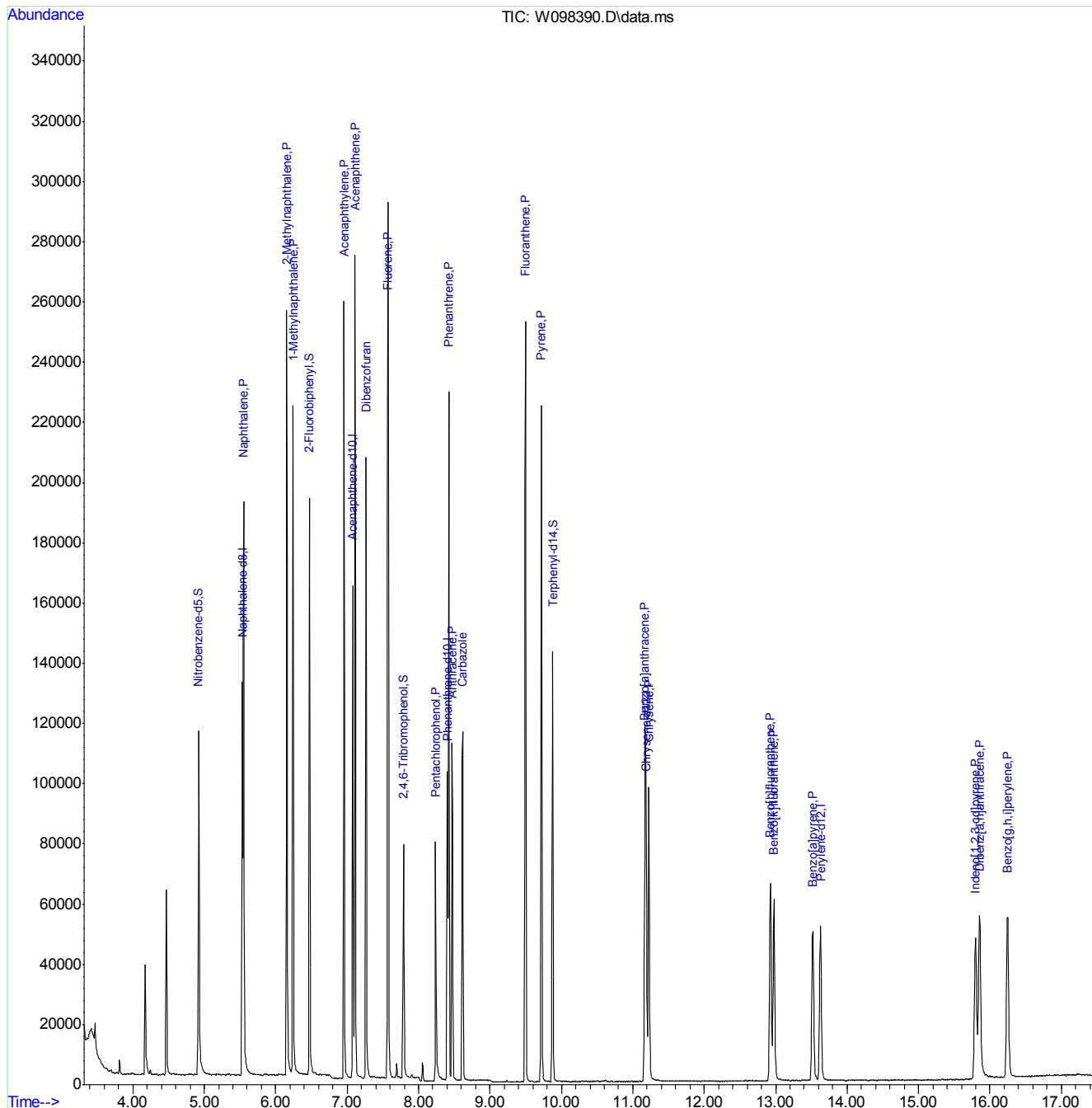
(#) = qualifier out of range (m) = manual integration (+) = signals summed

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\SW4369\  
Data File : W098390.D  
Acq On : 29 Mar 2017 11:57 am  
Operator : fouads  
Sample : op64367-bs  
Misc : op64367,sw4369,15.0,,,1,1,soil  
ALS Vial : 8 Sample Multiplier: 1

Inst : MSBNA01

Quant Time: Mar 29 14:39:00 2017  
Quant Method : C:\msdchem\1\METHODS\simpahf.m  
Quant Title : PAH's by 8270 SIM  
QLast Update : Thu Mar 02 08:24:54 2017  
Response via : Initial Calibration



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\SW4369\  
 Data File : W098399.D  
 Acq On : 29 Mar 2017 3:23 pm  
 Operator : fouads  
 Sample : op64367-ms  
 Misc : op64367,sw4369,15.0,,,1,1,soil  
 ALS Vial : 17 Sample Multiplier: 1

Inst : MSBNA01

Quant Time: Mar 30 07:42:43 2017  
 Quant Method : C:\msdchem\1\METHODS\simpahf.m  
 Quant Title : PAH's by 8270 SIM  
 QLast Update : Thu Mar 02 08:24:54 2017  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	5.535	136	81326	4.00	ppm	0.00
6) Acenaphthene-d10	7.080	164	42430	4.00	ppm	-0.01
13) Phenanthrene-d10	8.400	188	63815	4.00	ppm	-0.01
20) Chrysene-d12	11.183	240	54095	4.00	ppm	-0.01
25) Perylene-d12	13.621	264	53798	4.00	ppm	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	4.916	82	40043	6.90	ppm	-0.01
Spiked Amount	10.000	Range	40 - 105	Recovery	=	69.00%
7) 2-Fluorobiphenyl	6.474	172	105351	8.18	ppm	-0.02
Spiked Amount	10.000	Range	43 - 107	Recovery	=	81.80%
14) 2,4,6-Tribromophenol	7.786	330	19446	16.51	ppm	-0.01
Spiked Amount	20.000	Range	42 - 108	Recovery	=	82.55%
22) Terphenyl-d14	9.875	244	71484	6.39	ppm	0.00
Spiked Amount	10.000	Range	45 - 119	Recovery	=	63.90%
Target Compounds						
					Qvalue	
3) Naphthalene	5.548	128	122376	6.20	ppm	98
4) 2-Methylnaphthalene	6.155	142	88448	6.12	ppm	94
5) 1-Methylnaphthalene	6.240	142	82785	6.25	ppm	98
9) Acenaphthylene	6.955	152	141056	7.09	ppm	100
10) Acenaphthene	7.108	153	82546	7.13	ppm	99
11) Dibenzofuran	7.267	168	122920	7.94	ppm	95
12) Fluorene	7.572	166	103102	7.54	ppm	99
15) Pentachlorophenol	8.237	266	21646	13.26	ppm	97
16) Phenanthrene	8.424	178	129864	7.19	ppm	99
17) Anthracene	8.468	178	65225	3.30	ppm	100
18) Carbazole	8.611	167	71702	3.78	ppm	99
19) Fluoranthene	9.496	202	158527	8.15	ppm	98
21) Pyrene	9.718	202	156275	6.54	ppm	98
23) Benzo[a]anthracene	11.169	228	76960	3.66	ppm	98
24) Chrysene	11.223	228	70759	3.79	ppm	99
26) Benzo[b]fluoranthene	12.923	252	77372	3.87	ppm	98
27) Benzo[k]fluoranthene	12.972	252	69242	3.60	ppm	99
28) Benzo[a]pyrene	13.513	252	67173	3.52	ppm	99
29) Indeno[1,2,3-cd]pyrene	15.796	276	57947	3.70	ppm	94
30) Dibenz[a,h]anthracene	15.850	278	49264	3.30	ppm	99
31) Benzo[g,h,i]perylene	16.243	276	60862	3.44	ppm	98

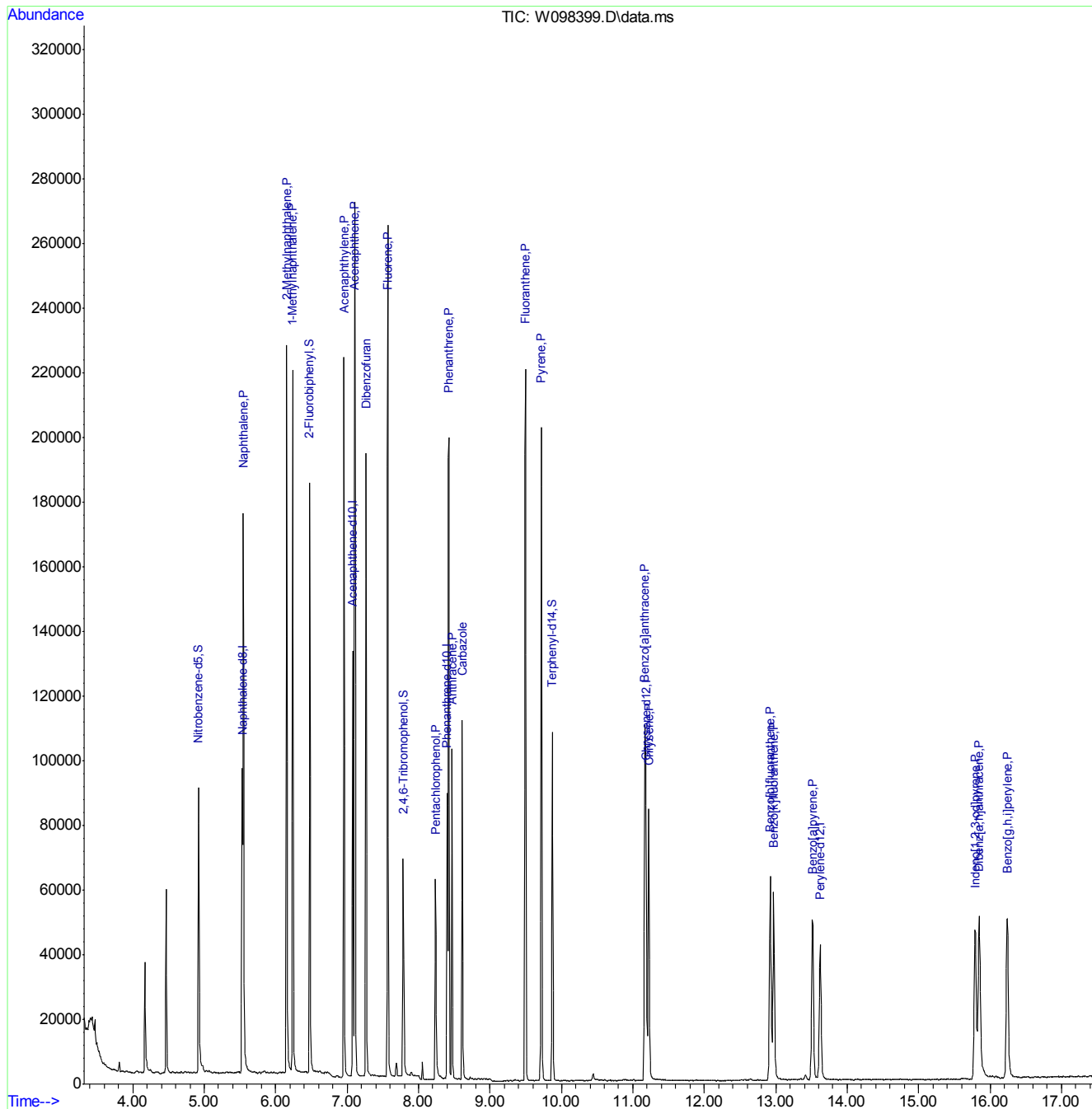
(#) = qualifier out of range (m) = manual integration (+) = signals summed

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\SW4369\  
Data File : W098399.D  
Acq On : 29 Mar 2017 3:23 pm  
Operator : fouads  
Sample : op64367-ms  
Misc : op64367,sw4369,15.0,,,1,1,soil  
ALS Vial : 17 Sample Multiplier: 1

Inst : MSBNA01

Quant Time: Mar 30 07:42:43 2017  
Quant Method : C:\msdchem\1\METHODS\simpahf.m  
Quant Title : PAH's by 8270 SIM  
QLast Update : Thu Mar 02 08:24:54 2017  
Response via : Initial Calibration



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\SW4369\  
 Data File : W098400.D  
 Acq On : 29 Mar 2017 3:47 pm  
 Operator : foudas  
 Sample : op64367-msd  
 Misc : op64367,sw4369,15.6,,,1,1,soil  
 ALS Vial : 18 Sample Multiplier: 1

Inst : MSBNA01

Quant Time: Mar 30 07:42:45 2017  
 Quant Method : C:\msdchem\1\METHODS\simpahf.m  
 Quant Title : PAH's by 8270 SIM  
 QLast Update : Thu Mar 02 08:24:54 2017  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	5.534	136	78501	4.00	ppm	0.00
6) Acenaphthene-d10	7.080	164	40542	4.00	ppm	-0.01
13) Phenanthrene-d10	8.400	188	63165	4.00	ppm	-0.01
20) Chrysene-d12	11.184	240	52970	4.00	ppm	-0.01
25) Perylene-d12	13.622	264	52432	4.00	ppm	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	4.921	82	43136	7.70	ppm	0.00
Spiked Amount 10.000	Range 40	- 105	Recovery	=	77.00%	
7) 2-Fluorobiphenyl	6.472	172	107867	8.79	ppm	-0.02
Spiked Amount 10.000	Range 43	- 107	Recovery	=	87.90%	
14) 2,4,6-Tribromophenol	7.787	330	20694	17.75	ppm	-0.01
Spiked Amount 20.000	Range 42	- 108	Recovery	=	88.75%	
22) Terphenyl-d14	9.876	244	76741	7.01	ppm	0.00
Spiked Amount 10.000	Range 45	- 119	Recovery	=	70.10%	
Target Compounds						
					Qvalue	
3) Naphthalene	5.553	128	121157	6.36	ppm	99
4) 2-Methylnaphthalene	6.153	142	87983	6.31	ppm	91
5) 1-Methylnaphthalene	6.244	142	82670	6.47	ppm	91
9) Acenaphthylene	6.955	152	140492	7.40	ppm	100
10) Acenaphthene	7.108	153	80454	7.27	ppm	98
11) Dibenzofuran	7.267	168	119522	8.09	ppm	99
12) Fluorene	7.572	166	106512	8.17	ppm	98
15) Pentachlorophenol	8.237	266	23712	14.62	ppm	98
16) Phenanthrene	8.424	178	134246	7.51	ppm	99
17) Anthracene	8.469	178	66076	3.38	ppm	99
18) Carbazole	8.611	167	69857	3.72	ppm	99
19) Fluoranthene	9.497	202	160964	8.37	ppm	97
21) Pyrene	9.718	202	161222	6.89	ppm	97
23) Benzo[a]anthracene	11.169	228	80274	3.90	ppm	99
24) Chrysene	11.223	228	75738	4.14	ppm	99
26) Benzo[b]fluoranthene	12.923	252	77165	3.97	ppm	97
27) Benzo[k]fluoranthene	12.973	252	71350	3.80	ppm	98
28) Benzo[a]pyrene	13.514	252	68096	3.67	ppm	99
29) Indeno[1,2,3-cd]pyrene	15.796	276	58710	3.85	ppm	92
30) Dibenz[a,h]anthracene	15.850	278	51259	3.52	ppm	99
31) Benzo[g,h,i]perylene	16.244	276	61164	3.54	ppm	99

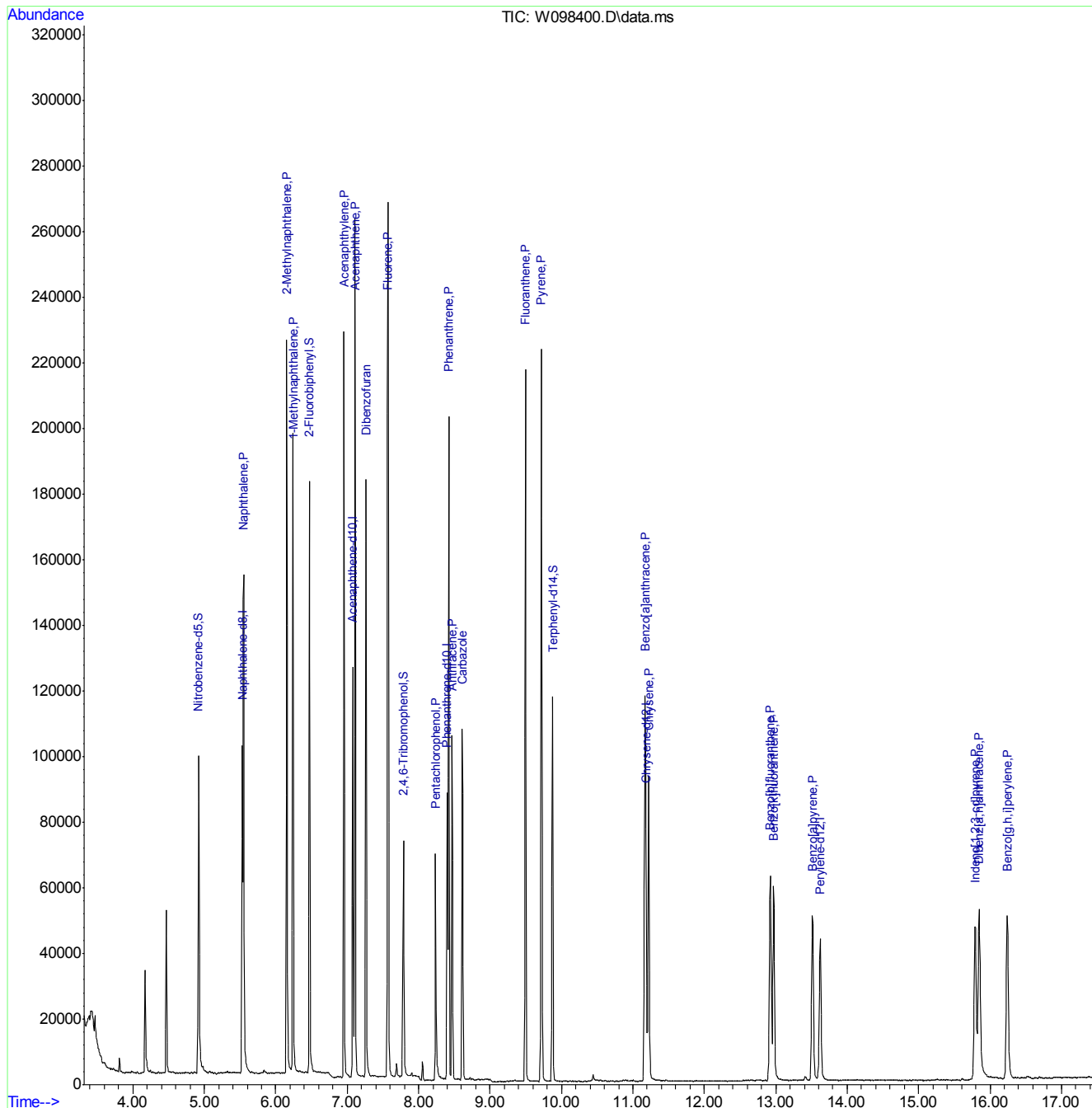
(#) = qualifier out of range (m) = manual integration (+) = signals summed

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\SW4369\  
Data File : W098400.D  
Acq On : 29 Mar 2017 3:47 pm  
Operator : fouads  
Sample : op64367-msd  
Misc : op64367,sw4369,15.6,,,1,1,soil  
ALS Vial : 18 Sample Multiplier: 1

Inst : MSBNA01

Quant Time: Mar 30 07:42:45 2017  
Quant Method : C:\msdchem\1\METHODS\simpahf.m  
Quant Title : PAH's by 8270 SIM  
QLast Update : Thu Mar 02 08:24:54 2017  
Response via : Initial Calibration



SW-846 Method 8270

Data File : C:\msdchem\1\DATA\SW4338\W097282.D

Vial: 1

Acq On : 13 Feb 2017 6:34 pm

Operator: fouads

Sample : dftpp

Inst : MSBNA01

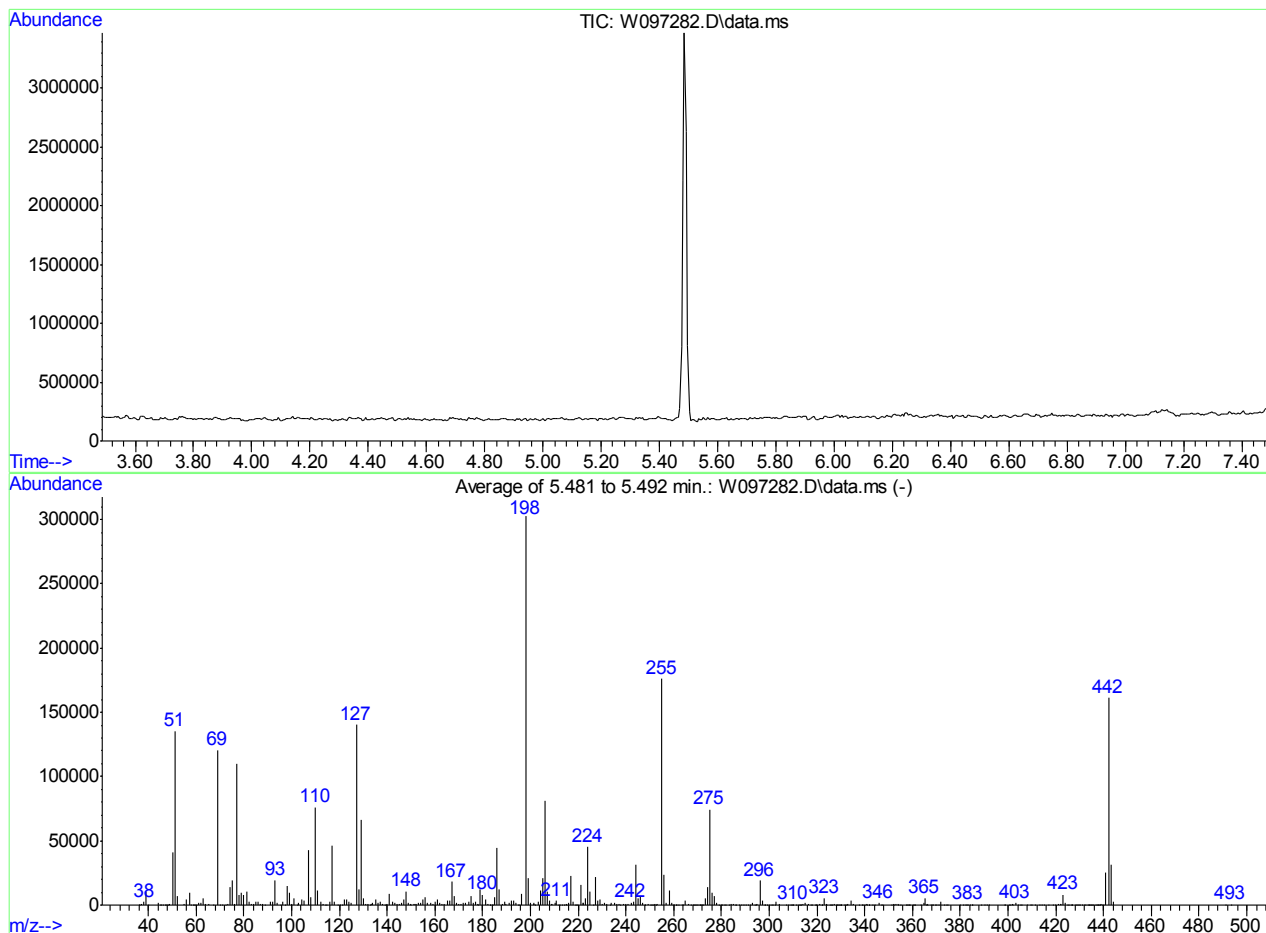
Misc : op63461,sw4338,15.0,,,1,1,soil

Multiplr: 1.00

MS Integration Params: RTEINT.P

Method : C:\msdchem\1\METHODS\dftpp.m (RTE Integrator)

Title : Tune Evaluation



AutoFind: Scans 448, 449, 450; Background Corrected with Scan 440

Target	Rel. to	Lower	Upper	Rel.	Raw	Result
Mass	Mass	Limit%	Limit%	Abn%	Abn	Pass/Fail
51	198	30	60	44.8	135535	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	39.9	120820	PASS
70	69	0.00	2	0.2	290	PASS
127	198	40	60	46.4	140221	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	302442	PASS
199	198	5	9	6.9	20920	PASS
275	198	10	30	24.6	74467	PASS
365	198	1	100	1.9	5711	PASS
441	443	0.01	100	82.5	25594	PASS
442	198	40	100	53.3	161074	PASS
443	442	17	23	19.3	31036	PASS

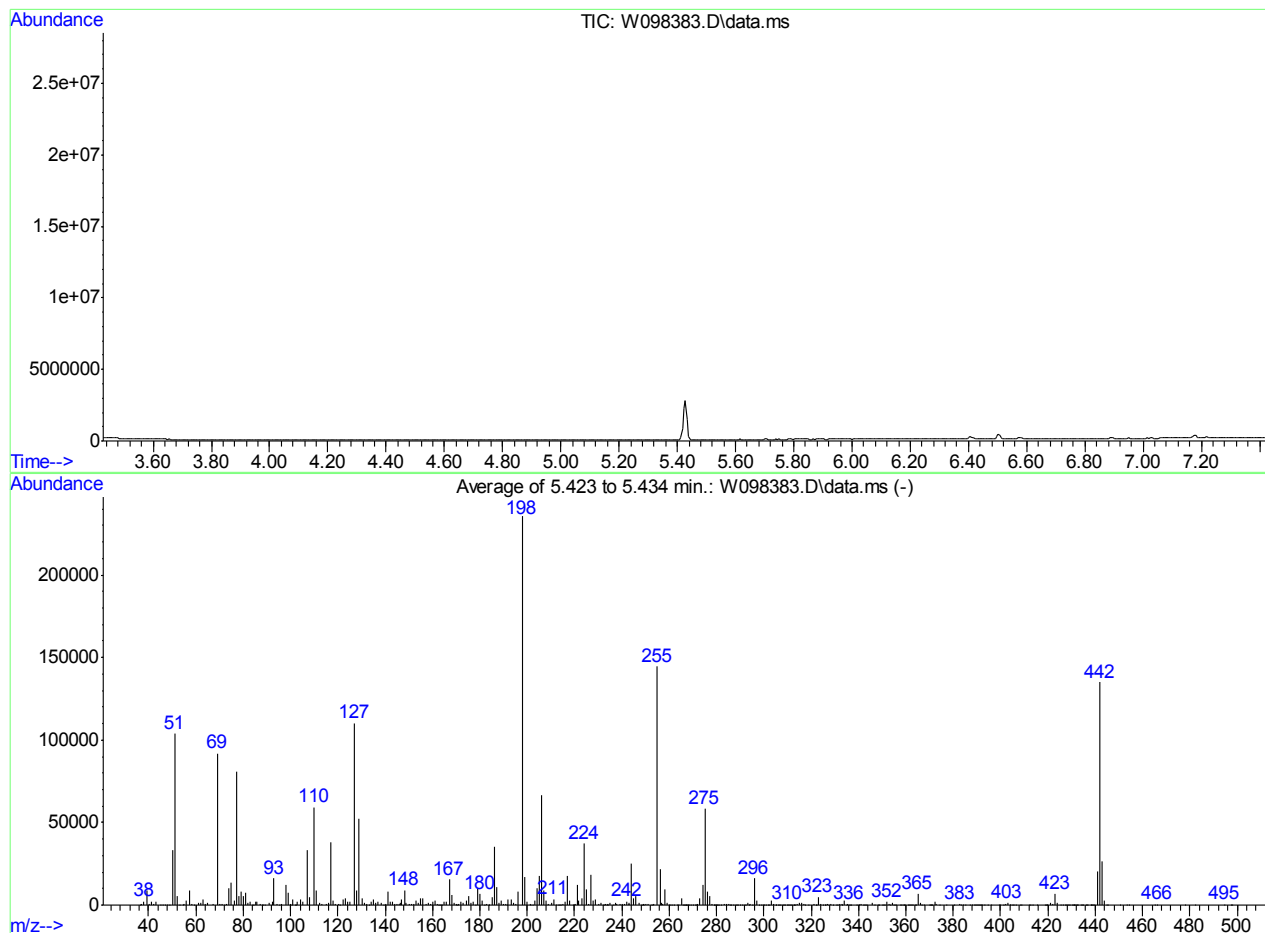
W097282.D dftpp.m

Tue Feb 14 11:03:56 2017

SW-846 Method 8270

Data File : C:\msdchem\1\DATA\SW4369\W098383.D Vial: 1  
 Acq On : 29 Mar 2017 9:01 am Operator: fouads  
 Sample : dftpp Inst : MSBNA01  
 Misc : op64229,sw4369,15.0,,,1,1,soil Multiplr: 1.00  
 MS Integration Params: RTEINT.P

Method : C:\msdchem\1\METHODS\dftpp.m (RTE Integrator)  
 Title : Tune Evaluation



AutoFind: Scans 437, 438, 439; Background Corrected with Scan 428

Target	Rel. to	Lower	Upper	Rel.	Raw	Result
Mass	Mass	Limit%	Limit%	Abn%	Abn	Pass/Fail
51	198	30	60	44.1	103809	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	39.0	91907	PASS
70	69	0.00	2	0.5	429	PASS
127	198	40	60	46.9	110321	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	235477	PASS
199	198	5	9	7.2	17021	PASS
275	198	10	30	24.7	58170	PASS
365	198	1	100	2.8	6703	PASS
441	443	0.01	100	76.4	20141	PASS
442	198	40	100	57.3	134874	PASS
443	442	17	23	19.5	26346	PASS

W098383.D dftpp.m Thu Mar 30 16:51:01 2017



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\SW4338\  
 Data File : W097284.D  
 Acq On : 13 Feb 2017 7:10 pm  
 Operator : fouads  
 Sample : ic4338-1  
 Misc : op63755,sw4338,14.9,,,1,1,soil  
 ALS Vial : 100 Sample Multiplier: 1

Inst : MSBNA01

Quant Time: Feb 14 08:01:29 2017  
 Quant Method : C:\msdchem\1\METHODS\simpahf.m  
 Quant Title : PAH's by 8270 SIM  
 QLast Update : Mon Feb 13 16:39:13 2017  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	5.587	136	155507	4.00	ppm	0.00
6) Acenaphthene-d10	7.135	164	79818	4.00	ppm	0.00
13) Phenanthrene-d10	8.460	188	116249	4.00	ppm	0.00
20) Chrysene-d12	11.268	240	95805	4.00	ppm	0.00
25) Perylene-d12	13.724	264	86945	4.00	ppm	-0.01
System Monitoring Compounds						
2) Nitrobenzene-d5	4.967	82	4853	0.29	ppm	0.01
Spiked Amount 10.000	Range 40 - 105		Recovery =	2.90%#		
7) 2-Fluorobiphenyl	6.525	172	14072	0.62	ppm	0.00
Spiked Amount 10.000	Range 43 - 107		Recovery =	6.20%#		
14) 2,4,6-Tribromophenol	7.841	330	1870	0.86	ppm	0.01
Spiked Amount 20.000	Range 42 - 108		Recovery =	4.30%#		
22) Terphenyl-d14	9.940	244	9682	0.47	ppm	0.01
Spiked Amount 10.000	Range 45 - 119		Recovery =	4.70%#		
Target Compounds						
					Qvalue	
3) Naphthalene	5.606	128	18391	0.48	ppm	96
4) 2-Methylnaphthalene	6.212	142	13530	0.48	ppm	91
5) 1-Methylnaphthalene	6.297	142	12176	0.51	ppm	92
8) 1,1'-Biphenyl	6.617	154	15349	0.61	ppm	97
9) Acenaphthylene	7.010	152	22540	0.66	ppm	97
10) Acenaphthene	7.163	153	11890	0.57	ppm	89
11) Dibenzofuran	7.322	168	16849	0.60	ppm	90
12) Fluorene	7.627	166	14420	0.56	ppm	97
15) Pentachlorophenol	8.297	266	1564	0.51	ppm	87
16) Phenanthrene	8.480	178	16856	0.57	ppm	96
17) Anthracene	8.524	178	8993	0.26	ppm	96
18) Carbazole	8.667	167	8300	0.26	ppm	96
19) Fluoranthene	9.557	202	20573	0.53	ppm	95
21) Pyrene	9.783	202	21261	0.50	ppm	95
23) Benzo[a]anthracene	11.253	228	8840	0.23	ppm	96
24) Chrysene	11.308	228	7507	0.22	ppm	96
26) Benzo[b]fluoranthene	13.021	252	7800	0.24	ppm	91
27) Benzo[k]fluoranthene	13.070	252	7798	0.25	ppm	89
28) Benzo[a]pyrene	13.611	252	7085	0.23	ppm	94
29) Indeno[1,2,3-cd]pyrene	15.889	276	5713	0.24	ppm	93
30) Dibenz[a,h]anthracene	15.953	278	5594	0.25	ppm	89
31) Benzo[g,h,i]perylene	16.332	276	6953	0.24	ppm	88

(#) = qualifier out of range (m) = manual integration (+) = signals summed



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\SW4338\  
 Data File : W097285.D  
 Acq On : 13 Feb 2017 7:33 pm  
 Operator : fouads  
 Sample : ic4338-2  
 Misc : op63755,sw4338,14.9,,,1,1,soil  
 ALS Vial : 99 Sample Multiplier: 1

Inst : MSBNA01

Quant Time: Feb 14 08:01:31 2017  
 Quant Method : C:\msdchem\1\METHODS\simpahf.m  
 Quant Title : PAH's by 8270 SIM  
 QLast Update : Mon Feb 13 16:39:13 2017  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	5.588	136	134927	4.00	ppm	0.00
6) Acenaphthene-d10	7.136	164	80758	4.00	ppm	0.00
13) Phenanthrene-d10	8.459	188	133515	4.00	ppm	0.00
20) Chrysene-d12	11.267	240	112040	4.00	ppm	-0.01
25) Perylene-d12	13.729	264	93949	4.00	ppm	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	4.968	82	20343	1.39	ppm	0.01
Spiked Amount 10.000	Range 40 - 105		Recovery =	13.90%#		
7) 2-Fluorobiphenyl	6.527	172	56085	2.44	ppm	0.00
Spiked Amount 10.000	Range 43 - 107		Recovery =	24.40%#		
14) 2,4,6-Tribromophenol	7.842	330	9944	3.99	ppm	0.01
Spiked Amount 20.000	Range 42 - 108		Recovery =	19.95%#		
22) Terphenyl-d14	9.944	244	50451	2.12	ppm	0.02
Spiked Amount 10.000	Range 45 - 119		Recovery =	21.20%#		
Target Compounds						
					Qvalue	
3) Naphthalene	5.607	128	73820	2.23	ppm	98
4) 2-Methylnaphthalene	6.207	142	58230	2.44	ppm	95
5) 1-Methylnaphthalene	6.298	142	50113	2.44	ppm	96
8) 1,1'-Biphenyl	6.618	154	57135	2.23	ppm	98
9) Acenaphthylene	7.011	152	91730	2.66	ppm	98
10) Acenaphthene	7.163	153	50529	2.39	ppm	93
11) Dibenzofuran	7.323	168	73606	2.62	ppm	97
12) Fluorene	7.627	166	63721	2.48	ppm	100
15) Pentachlorophenol	8.291	266	11395	3.23	ppm	94
16) Phenanthrene	8.478	178	81262	2.39	ppm	98
17) Anthracene	8.523	178	45605	1.16	ppm	98
18) Carbazole	8.665	167	44324	1.22	ppm	96
19) Fluoranthene	9.555	202	104214	2.39	ppm	96
21) Pyrene	9.782	202	109654	2.23	ppm	97
23) Benzo[a]anthracene	11.252	228	45196	1.00	ppm	97
24) Chrysene	11.306	228	39380	0.99	ppm	96
26) Benzo[b]fluoranthene	13.021	252	39219	1.10	ppm	94
27) Benzo[k]fluoranthene	13.070	252	37838	1.12	ppm	96
28) Benzo[a]pyrene	13.616	252	37461	1.13	ppm	94
29) Indeno[1,2,3-cd]pyrene	15.884	276	28611	1.12	ppm	95
30) Dibenz[a,h]anthracene	15.953	278	27217	1.13	ppm	92
31) Benzo[g,h,i]perylene	16.327	276	31911	1.04	ppm	89

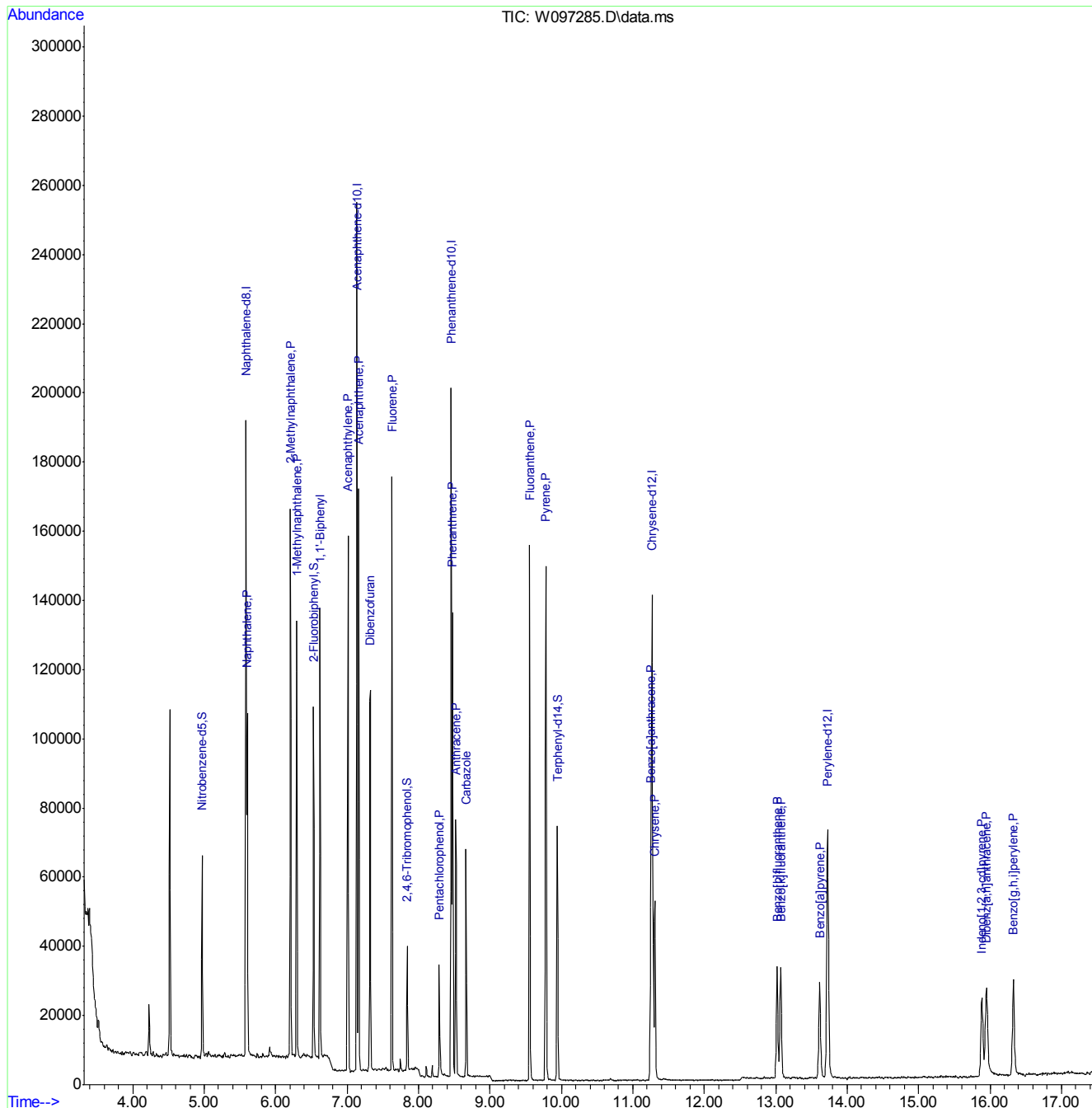
(#) = qualifier out of range (m) = manual integration (+) = signals summed

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\SW4338\  
Data File : W097285.D  
Acq On : 13 Feb 2017 7:33 pm  
Operator : fouads  
Sample : ic4338-2  
Misc : op63755,sw4338,14.9,,,1,1,soil  
ALS Vial : 99 Sample Multiplier: 1

Inst : MSBNA01

Quant Time: Feb 14 08:01:31 2017  
Quant Method : C:\msdchem\1\METHODS\simpahf.m  
Quant Title : PAH's by 8270 SIM  
QLast Update : Mon Feb 13 16:39:13 2017  
Response via : Initial Calibration



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\SW4338\  
 Data File : W097286.D  
 Acq On : 13 Feb 2017 7:55 pm  
 Operator : foudas  
 Sample : ic4338-3  
 Misc : op63755,sw4338,14.9,,,1,1,soil  
 ALS Vial : 98 Sample Multiplier: 1

Inst : MSBNA01

Quant Time: Feb 14 08:01:33 2017  
 Quant Method : C:\msdchem\1\METHODS\simpahf.m  
 Quant Title : PAH's by 8270 SIM  
 QLast Update : Mon Feb 13 16:39:13 2017  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	5.587	136	139982	4.00	ppm	0.00
6) Acenaphthene-d10	7.135	164	79947	4.00	ppm	0.00
13) Phenanthrene-d10	8.460	188	137402	4.00	ppm	0.00
20) Chrysene-d12	11.268	240	106587	4.00	ppm	0.00
25) Perylene-d12	13.724	264	93501	4.00	ppm	-0.01
System Monitoring Compounds						
2) Nitrobenzene-d5	4.967	82	50831	3.35	ppm	0.01
Spiked Amount 10.000	Range 40 - 105		Recovery =	33.50%		
7) 2-Fluorobiphenyl	6.526	172	127795	5.64	ppm	0.00
Spiked Amount 10.000	Range 43 - 107		Recovery =	56.40%		
14) 2,4,6-Tribromophenol	7.841	330	24494	9.54	ppm	0.01
Spiked Amount 20.000	Range 42 - 108		Recovery =	47.70%		
22) Terphenyl-d14	9.940	244	108490	4.83	ppm	0.01
Spiked Amount 10.000	Range 45 - 119		Recovery =	48.30%		
Target Compounds						
					Qvalue	
3) Naphthalene	5.606	128	168526	4.91	ppm	99
4) 2-Methylnaphthalene	6.206	142	131027	5.40	ppm	94
5) 1-Methylnaphthalene	6.297	142	116306	5.55	ppm	97
8) 1,1'-Biphenyl	6.617	154	137066	5.40	ppm	97
9) Acenaphthylene	7.010	152	202779	6.01	ppm	97
10) Acenaphthene	7.162	153	116415	5.57	ppm	94
11) Dibenzofuran	7.322	168	168281	6.13	ppm	93
12) Fluorene	7.626	166	147245	5.85	ppm	99
15) Pentachlorophenol	8.292	266	35056	9.65	ppm	98
16) Phenanthrene	8.479	178	193792	5.55	ppm	99
17) Anthracene	8.524	178	102437	2.57	ppm	99
18) Carbazole	8.666	167	106063	2.92	ppm	96
19) Fluoranthene	9.557	202	234083	5.36	ppm	98
21) Pyrene	9.783	202	234984	5.07	ppm	97
23) Benzo[a]anthracene	11.253	228	103768	2.42	ppm	98
24) Chrysene	11.303	228	93133	2.46	ppm	98
26) Benzo[b]fluoranthene	13.016	252	90804	2.56	ppm	94
27) Benzo[k]fluoranthene	13.070	252	82666	2.45	ppm	94
28) Benzo[a]pyrene	13.611	252	82282	2.48	ppm	96
29) Indeno[1,2,3-cd]pyrene	15.884	276	66591	2.61	ppm	94
30) Dibenz[a,h]anthracene	15.953	278	62670	2.62	ppm	93
31) Benzo[g,h,i]perylene	16.327	276	75327	2.47	ppm	88

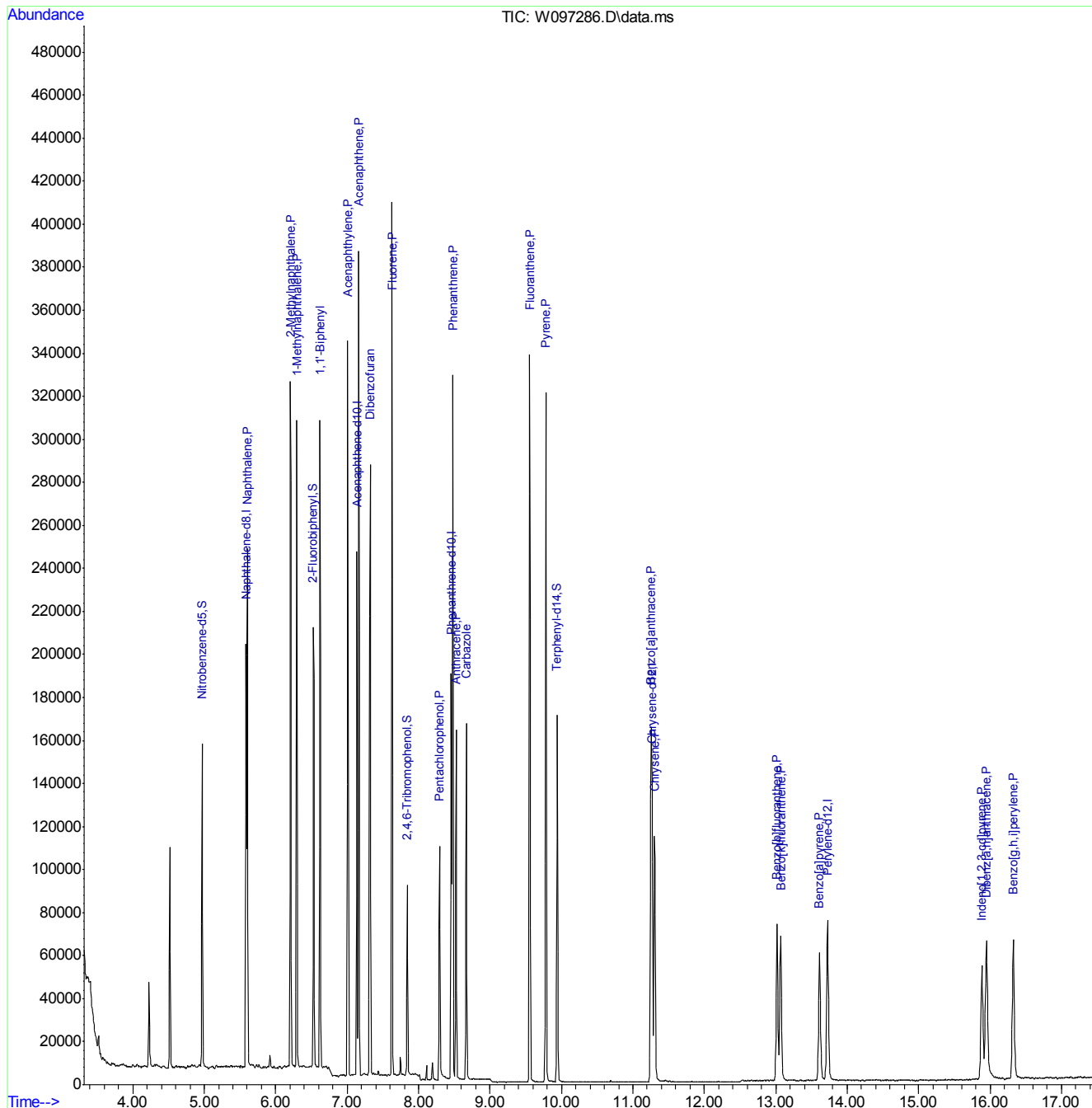
(#) = qualifier out of range (m) = manual integration (+) = signals summed

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\SW4338\  
Data File : W097286.D  
Acq On : 13 Feb 2017 7:55 pm  
Operator : fouads  
Sample : ic4338-3  
Misc : op63755,sw4338,14.9,,,1,1,soil  
ALS Vial : 98 Sample Multiplier: 1

Inst : MSBNA01

Quant Time: Feb 14 08:01:33 2017  
Quant Method : C:\msdchem\1\METHODS\simpahf.m  
Quant Title : PAH's by 8270 SIM  
QLast Update : Mon Feb 13 16:39:13 2017  
Response via : Initial Calibration



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\SW4338\  
 Data File : W097287.D  
 Acq On : 13 Feb 2017 8:18 pm  
 Operator : fouads  
 Sample : icc4338-4  
 Misc : op63755,sw4338,14.9,,,1,1,soil  
 ALS Vial : 97 Sample Multiplier: 1

Inst : MSBNA01

Quant Time: Feb 14 08:01:35 2017  
 Quant Method : C:\msdchem\1\METHODS\simpahf.m  
 Quant Title : PAH's by 8270 SIM  
 QLast Update : Mon Feb 13 16:39:13 2017  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	5.586	136	134355	4.00	ppm	0.00
6) Acenaphthene-d10	7.135	164	79791	4.00	ppm	0.00
13) Phenanthrene-d10	8.459	188	127548	4.00	ppm	0.00
20) Chrysene-d12	11.267	240	100499	4.00	ppm	-0.01
25) Perylene-d12	13.725	264	91230	4.00	ppm	-0.01
System Monitoring Compounds						
2) Nitrobenzene-d5	4.966	82	98498	6.77	ppm	0.01
Spiked Amount 10.000	Range 40 - 105		Recovery =	67.70%		
7) 2-Fluorobiphenyl	6.531	172	250672	11.13	ppm	0.00
Spiked Amount 10.000	Range 43 - 107		Recovery =	111.30%#		
14) 2,4,6-Tribromophenol	7.842	330	48219	20.23	ppm	0.01
Spiked Amount 20.000	Range 42 - 108		Recovery =	101.15%		
22) Terphenyl-d14	9.944	244	206919	9.93	ppm	0.02
Spiked Amount 10.000	Range 45 - 119		Recovery =	99.30%		
Target Compounds						
					Qvalue	
3) Naphthalene	5.605	128	329814	10.02	ppm	99
4) 2-Methylnaphthalene	6.212	142	246592	11.04	ppm	92
5) 1-Methylnaphthalene	6.296	142	220361	11.34	ppm	95
8) 1,1'-Biphenyl	6.616	154	265708	10.48	ppm	97
9) Acenaphthylene	7.011	152	386432	11.70	ppm	98
10) Acenaphthene	7.163	153	221857	10.64	ppm	96
11) Dibenzofuran	7.322	168	303452	11.27	ppm	94
12) Fluorene	7.627	166	269071	10.91	ppm	98
15) Pentachlorophenol	8.292	266	82534	24.47	ppm	99
16) Phenanthrene	8.479	178	353722	10.91	ppm	99
17) Anthracene	8.523	178	201123	5.67	ppm	98
18) Carbazole	8.666	167	195347	6.10	ppm	96
19) Fluoranthene	9.556	202	413204	10.68	ppm	97
21) Pyrene	9.787	202	431770	10.04	ppm	98
23) Benzo[a]anthracene	11.253	228	199968	4.95	ppm	99
24) Chrysene	11.307	228	172638	4.84	ppm	99
26) Benzo[b]fluoranthene	13.017	252	165853	4.80	ppm	95
27) Benzo[k]fluoranthene	13.066	252	157888	4.80	ppm	95
28) Benzo[a]pyrene	13.617	252	161131	4.99	ppm	96
29) Indeno[1,2,3-cd]pyrene	15.885	276	127435	5.12	ppm	92
30) Dibenz[a,h]anthracene	15.954	278	123341	5.28	ppm	94
31) Benzo[g,h,i]perylene	16.328	276	142576	4.78	ppm	86

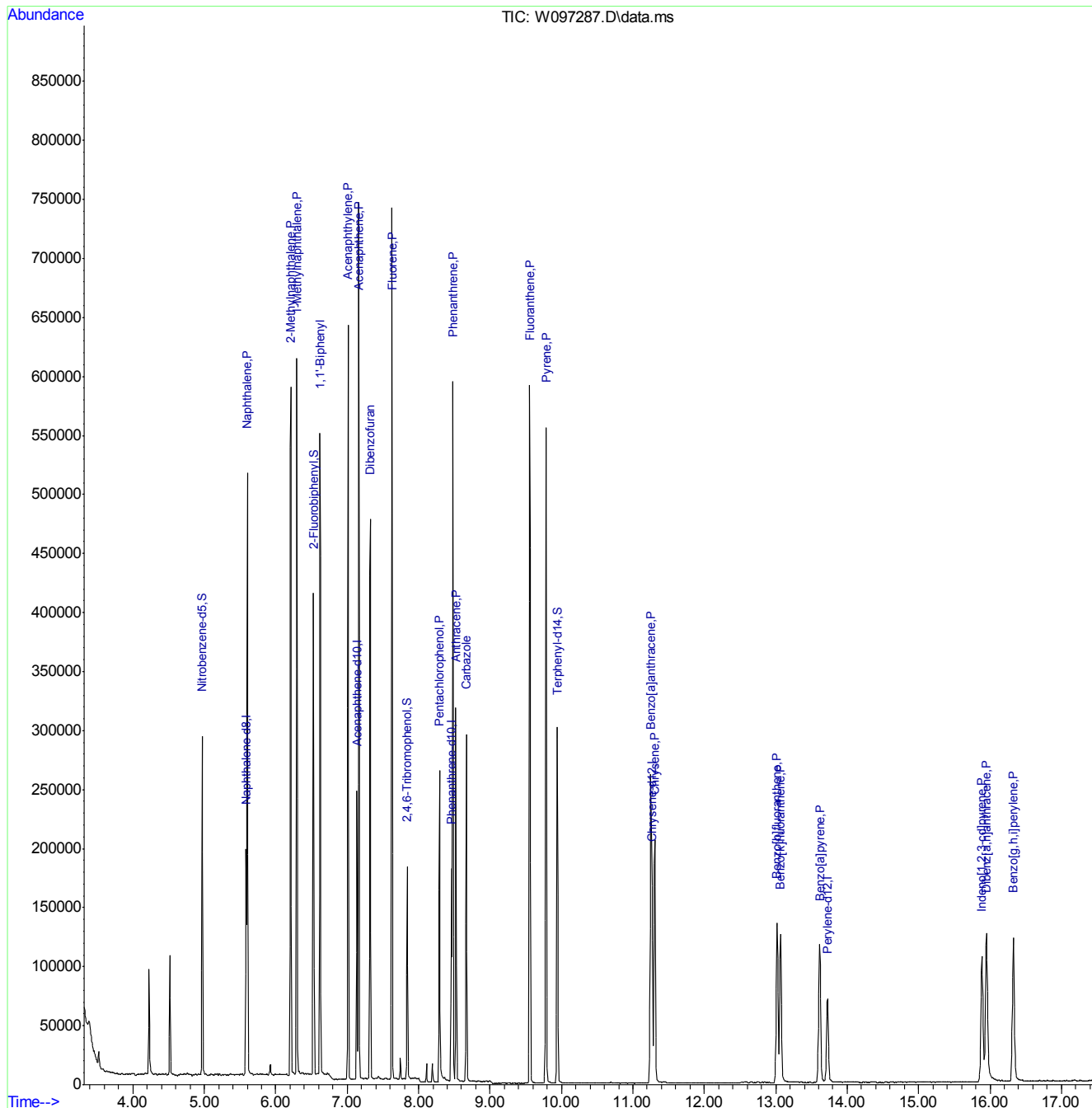
(#) = qualifier out of range (m) = manual integration (+) = signals summed

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\SW4338\  
Data File : W097287.D  
Acq On : 13 Feb 2017 8:18 pm  
Operator : fouads  
Sample : icc4338-4  
Misc : op63755,sw4338,14.9,,,1,1,soil  
ALS Vial : 97 Sample Multiplier: 1

Inst : MSBNA01

Quant Time: Feb 14 08:01:35 2017  
Quant Method : C:\msdchem\1\METHODS\simpahf.m  
Quant Title : PAH's by 8270 SIM  
QLast Update : Mon Feb 13 16:39:13 2017  
Response via : Initial Calibration



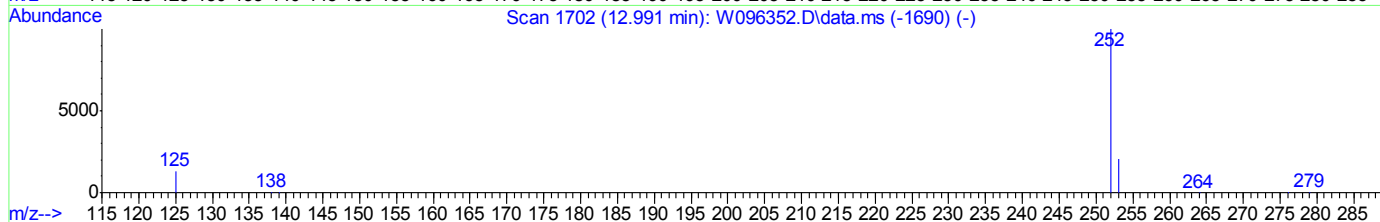
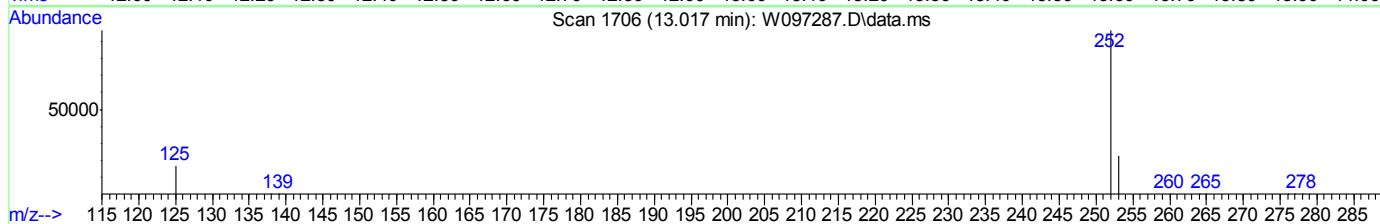
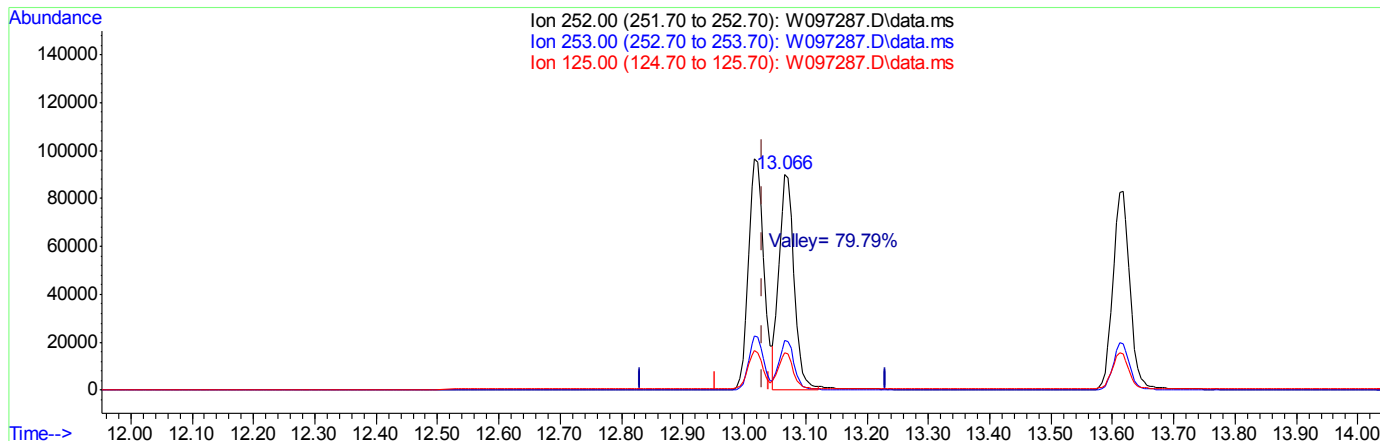


## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\SW4338\  
Data File : W097287.D  
Acq On : 13 Feb 2017 8:18 pm  
Operator : fouads  
Sample : icc4338-4  
Misc : op63755,sw4338,14.9,,,1,1,soil  
ALS Vial : 97 Sample Multiplier: 1

Inst : MSBNA01

Quant Time: Feb 14 08:01:35 2017  
Quant Method : C:\msdchem\1\METHODS\simpahf.m  
Quant Title : PAH's by 8270 SIM  
QLast Update : Mon Feb 13 16:39:13 2017  
Response via : Initial Calibration



TIC: W097287.D\data.ms

(26) Benzo[b]fluoranthene (P)

13.017min (-0.013) 4.80ppm

response 165853

Ion	Exp%	Act%
252.00	100	100
253.00	24.10	23.34
125.00	11.70	16.85
0.00	0.00	0.00

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\SW4338\  
 Data File : W097288.D  
 Acq On : 13 Feb 2017 8:41 pm  
 Operator : fouads  
 Sample : ic4338-5  
 Misc : op63755,sw4338,14.9,,,1,1,soil  
 ALS Vial : 96 Sample Multiplier: 1

Inst : MSBNA01

Quant Time: Feb 14 08:01:37 2017  
 Quant Method : C:\msdchem\1\METHODS\simpahf.m  
 Quant Title : PAH's by 8270 SIM  
 QLast Update : Mon Feb 13 16:39:13 2017  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	5.588	136	154493	4.00	ppm	0.00
6) Acenaphthene-d10	7.136	164	84735	4.00	ppm	0.00
13) Phenanthrene-d10	8.459	188	120114	4.00	ppm	0.00
20) Chrysene-d12	11.268	240	89208	4.00	ppm	-0.01
25) Perylene-d12	13.725	264	84562	4.00	ppm	-0.01
System Monitoring Compounds						
2) Nitrobenzene-d5	4.969	82	163308	9.76	ppm	0.01
Spiked Amount 10.000	Range 40	- 105	Recovery	=	97.60%	
7) 2-Fluorobiphenyl	6.527	172	377691	15.85	ppm	0.00
Spiked Amount 10.000	Range 43	- 107	Recovery	=	158.50%#	
14) 2,4,6-Tribromophenol	7.842	330	69078	30.78	ppm	0.01
Spiked Amount 20.000	Range 42	- 108	Recovery	=	153.90%#	
22) Terphenyl-d14	9.944	244	249391	13.64	ppm	0.02
Spiked Amount 10.000	Range 45	- 119	Recovery	=	136.40%#	
Target Compounds						
					Qvalue	
3) Naphthalene	5.601	128	537184	14.19	ppm	98
4) 2-Methylnaphthalene	6.208	142	375329	15.06	ppm	97
5) 1-Methylnaphthalene	6.299	142	340058	15.61	ppm	96
8) 1,1'-Biphenyl	6.618	154	408912	15.19	ppm	97
9) Acenaphthylene	7.011	152	559645	16.21	ppm	98
10) Acenaphthene	7.163	153	314951	14.22	ppm	96
11) Dibenzofuran	7.322	168	452271	16.08	ppm	95
12) Fluorene	7.627	166	378147	14.64	ppm	98
15) Pentachlorophenol	8.292	266	126003	39.68	ppm	99
16) Phenanthrene	8.479	178	466660	15.28	ppm	99
17) Anthracene	8.523	178	258693	8.00	ppm	99
18) Carbazole	8.666	167	246451	8.51	ppm	96
19) Fluoranthene	9.556	202	526442	15.04	ppm	97
21) Pyrene	9.782	202	544407	14.46	ppm	96
23) Benzo[a]anthracene	11.253	228	242320	6.75	ppm	100
24) Chrysene	11.307	228	222391	7.03	ppm	98
26) Benzo[b]fluoranthene	13.022	252	219886	6.86	ppm	95
27) Benzo[k]fluoranthene	13.066	252	202266	6.63	ppm	95
28) Benzo[a]pyrene	13.612	252	210822	7.04	ppm	95
29) Indeno[1,2,3-cd]pyrene	15.890	276	186142	8.06	ppm	97
30) Dibenz[a,h]anthracene	15.954	278	169838	7.84	ppm	93
31) Benzo[g,h,i]perylene	16.328	276	204963	7.42	ppm	84

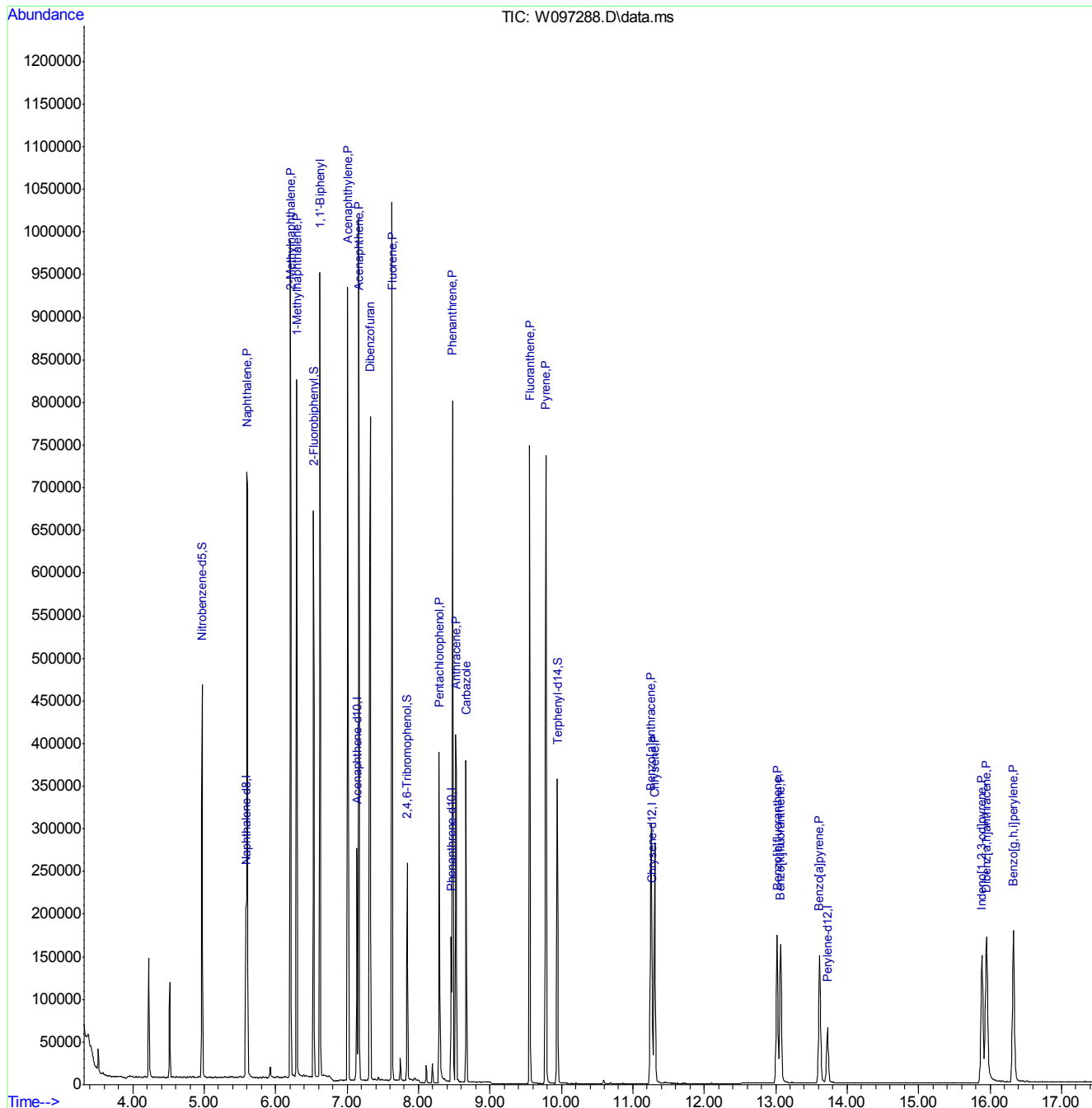
(#) = qualifier out of range (m) = manual integration (+) = signals summed

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\SW4338\  
Data File : W097288.D  
Acq On : 13 Feb 2017 8:41 pm  
Operator : fouads  
Sample : ic4338-5  
Misc : op63755,sw4338,14.9,,,1,1,soil  
ALS Vial : 96 Sample Multiplier: 1

Inst : MSBNA01

Quant Time: Feb 14 08:01:37 2017  
Quant Method : C:\msdchem\1\METHODS\simpahf.m  
Quant Title : PAH's by 8270 SIM  
QLast Update : Mon Feb 13 16:39:13 2017  
Response via : Initial Calibration



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\SW4338\  
 Data File : W097289.D  
 Acq On : 13 Feb 2017 9:04 pm  
 Operator : fouads  
 Sample : ic4338-6  
 Misc : op63755,sw4338,14.9,,,1,1,soil  
 ALS Vial : 95 Sample Multiplier: 1

Inst : MSBNA01

Quant Time: Feb 14 08:01:39 2017  
 Quant Method : C:\msdchem\1\METHODS\simpahf.m  
 Quant Title : PAH's by 8270 SIM  
 QLast Update : Mon Feb 13 16:39:13 2017  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	5.587	136	149144	4.00	ppm	0.00
6) Acenaphthene-d10	7.135	164	84778	4.00	ppm	0.00
13) Phenanthrene-d10	8.460	188	124750	4.00	ppm	0.00
20) Chrysene-d12	11.268	240	88447	4.00	ppm	0.00
25) Perylene-d12	13.724	264	81699	4.00	ppm	-0.01
System Monitoring Compounds						
2) Nitrobenzene-d5	4.967	82	206675	12.79	ppm	0.01
Spiked Amount 10.000	Range 40	- 105	Recovery	=	127.90%#	
7) 2-Fluorobiphenyl	6.532	172	473272	19.92	ppm	0.01
Spiked Amount 10.000	Range 43	- 107	Recovery	=	199.20%#	
14) 2,4,6-Tribromophenol	7.841	330	88527	37.98	ppm	0.01
Spiked Amount 20.000	Range 42	- 108	Recovery	=	189.90%#	
22) Terphenyl-d14	9.945	244	341188	19.15	ppm	0.02
Spiked Amount 10.000	Range 45	- 119	Recovery	=	191.50%#	
Target Compounds						
					Qvalue	
3) Naphthalene	5.606	128	646463	17.68	ppm	98
4) 2-Methylnaphthalene	6.213	142	479965	20.89	ppm	91
5) 1-Methylnaphthalene	6.297	142	439465	21.70	ppm	93
8) 1,1'-Biphenyl	6.617	154	523235	19.43	ppm	96
9) Acenaphthylene	7.010	152	732740	21.62	ppm	97
10) Acenaphthene	7.162	153	419986	18.95	ppm	94
11) Dibenzofuran	7.322	168	558518	20.14	ppm	88
12) Fluorene	7.626	166	511676	20.22	ppm	98
15) Pentachlorophenol	8.293	266	174639	52.95	ppm	98
16) Phenanthrene	8.480	178	639918	20.17	ppm	99
17) Anthracene	8.524	178	346526	10.74	ppm	99
18) Carbazole	8.667	167	327199	11.46	ppm	96
19) Fluoranthene	9.557	202	708690	20.57	ppm	97
21) Pyrene	9.783	202	704841	19.18	ppm	96
23) Benzo[a]anthracene	11.254	228	324712	9.13	ppm	99
24) Chrysene	11.308	228	297927	9.50	ppm	99
26) Benzo[b]fluoranthene	13.021	252	269641	8.71	ppm	95
27) Benzo[k]fluoranthene	13.070	252	272402	9.25	ppm	96
28) Benzo[a]pyrene	13.616	252	276018	9.54	ppm	95
29) Indeno[1,2,3-cd]pyrene	15.893	276	234292	10.51	ppm	99
30) Dibenz[a,h]anthracene	15.952	278	224771	10.74	ppm	91
31) Benzo[g,h,i]perylene	16.326	276	262260	9.83	ppm	85

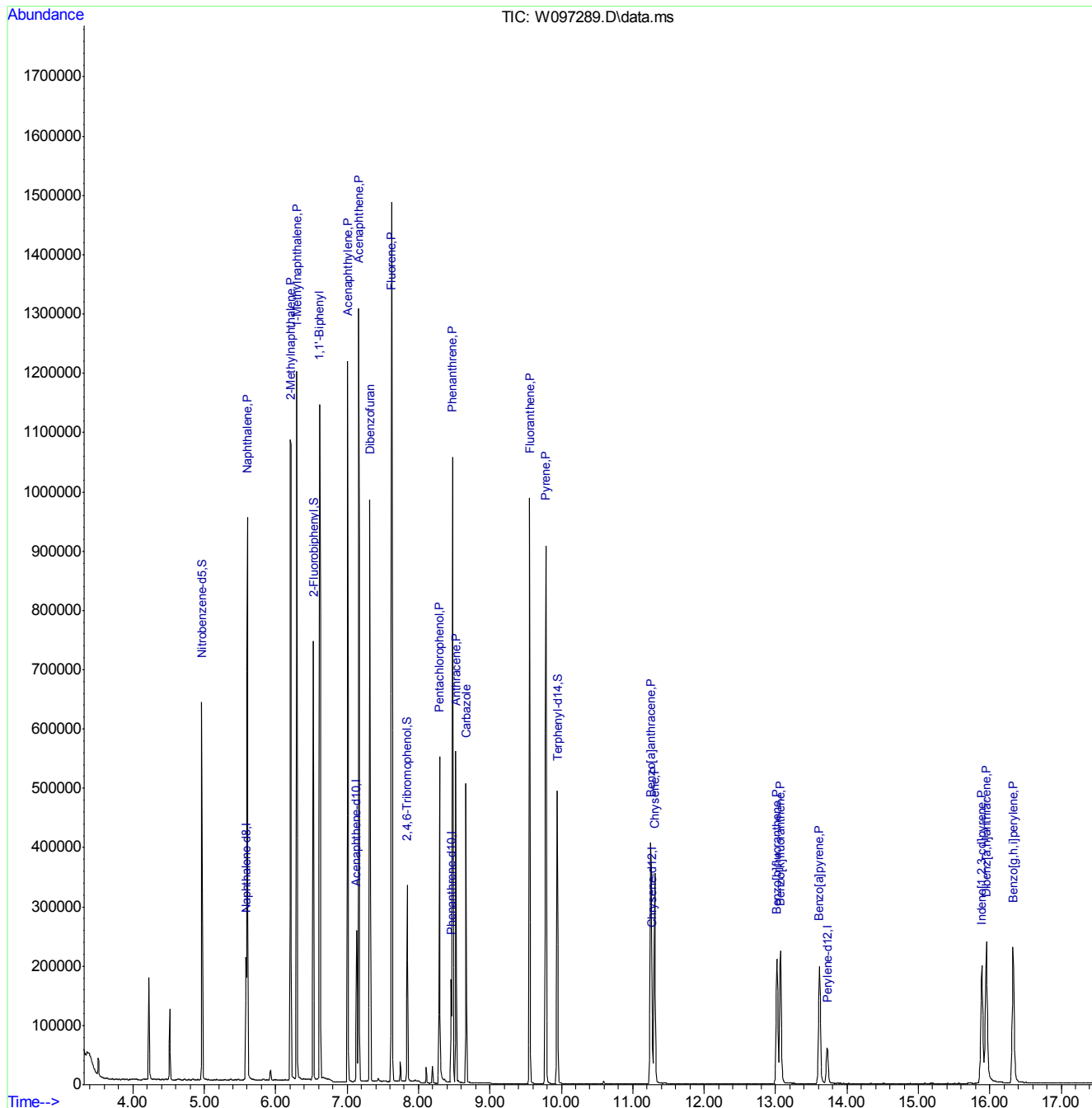
(#) = qualifier out of range (m) = manual integration (+) = signals summed

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\SW4338\  
Data File : W097289.D  
Acq On : 13 Feb 2017 9:04 pm  
Operator : fouads  
Sample : ic4338-6  
Misc : op63755,sw4338,14.9,,,1,1,soil  
ALS Vial : 95 Sample Multiplier: 1

Inst : MSBNA01

Quant Time: Feb 14 08:01:39 2017  
Quant Method : C:\msdchem\1\METHODS\simpahf.m  
Quant Title : PAH's by 8270 SIM  
QLast Update : Mon Feb 13 16:39:13 2017  
Response via : Initial Calibration



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\SW4338\  
 Data File : W097290.D  
 Acq On : 13 Feb 2017 9:27 pm  
 Operator : fouads  
 Sample : ic4338-7  
 Misc : op63755,sw4338,14.9,,,1,1,soil  
 ALS Vial : 94 Sample Multiplier: 1

Inst : MSBNA01

Quant Time: Feb 14 08:09:40 2017  
 Quant Method : C:\msdchem\1\METHODS\simpahf.m  
 Quant Title : PAH's by 8270 SIM  
 QLast Update : Tue Feb 14 08:09:11 2017  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	5.586	136	140616	4.00	ppm	0.00
6) Acenaphthene-d10	7.135	164	76981	4.00	ppm	0.00
13) Phenanthrene-d10	8.460	188	125724	4.00	ppm	0.00
20) Chrysene-d12	11.273	240	94901	4.00	ppm	0.00
25) Perylene-d12	13.724	264	87235	4.00	ppm	-0.01
System Monitoring Compounds						
2) Nitrobenzene-d5	4.967	82	341241	22.40	ppm	0.01
Spiked Amount 10.000	Range 40	- 105	Recovery	=	224.00%#	
7) 2-Fluorobiphenyl	6.532	172	806570	33.51	ppm	0.01
Spiked Amount 10.000	Range 43	- 107	Recovery	=	335.10%#	
14) 2,4,6-Tribromophenol	7.848	330	169287	72.06	ppm	0.02
Spiked Amount 20.000	Range 42	- 108	Recovery	=	360.30%#	
22) Terphenyl-d14	9.945	244	686477	33.00	ppm	0.02
Spiked Amount 10.000	Range 45	- 119	Recovery	=	330.00%#	
Target Compounds						
					Qvalue	
3) Naphthalene	5.606	128	1091881	31.68	ppm	98
4) 2-Methylnaphthalene	6.212	142	788150	31.80	ppm	92
5) 1-Methylnaphthalene	6.297	142	752406	33.85	ppm	88
8) 1,1'-Biphenyl	6.623	154	896300	36.65	ppm	98
9) Acenaphthylene	7.010	152	1208723	34.96	ppm	97
10) Acenaphthene	7.169	153	723386	35.95	ppm	98
11) Dibenzofuran	7.322	168	969602	35.07	ppm	80
12) Fluorene	7.626	166	853067	33.35	ppm	96
15) Pentachlorophenol	8.297	266	386054	116.14	ppm	95
16) Phenanthrene	8.484	178	1199094	37.51	ppm	99
17) Anthracene	8.529	178	658011	18.59	ppm	99
18) Carbazole	8.671	167	607419	18.88	ppm	97
19) Fluoranthene	9.562	202	1379150	34.66	ppm	97
21) Pyrene	9.788	202	1416166	32.11	ppm	96
23) Benzo[a]anthracene	11.258	228	645552	16.92	ppm	98
24) Chrysene	11.308	228	591636	17.58	ppm	99
26) Benzo[b]fluoranthene	13.026	252	529072	16.00	ppm	95
27) Benzo[k]fluoranthene	13.075	252	525895	16.72	ppm	95
28) Benzo[a]pyrene	13.621	252	521156	16.86	ppm	95
29) Indeno[1,2,3-cd]pyrene	15.899	276	453588	19.05	ppm	94
30) Dibenz[a,h]anthracene	15.958	278	439207	19.65	ppm	90
31) Benzo[g,h,i]perylene	16.341	276	498218	17.48	ppm	87

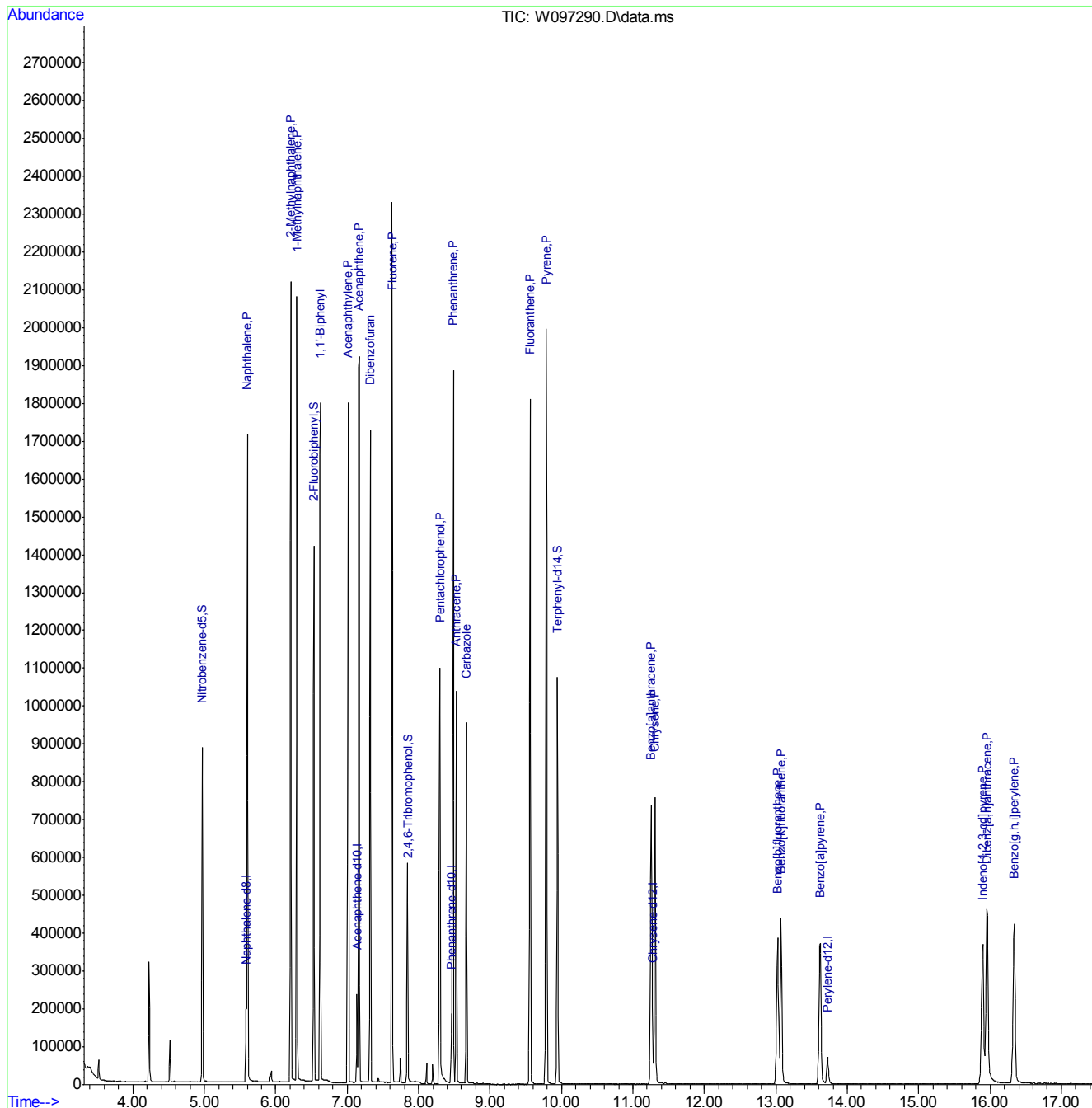
(#) = qualifier out of range (m) = manual integration (+) = signals summed

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\SW4338\  
Data File : W097290.D  
Acq On : 13 Feb 2017 9:27 pm  
Operator : fouads  
Sample : ic4338-7  
Misc : op63755,sw4338,14.9,,,1,1,soil  
ALS Vial : 94 Sample Multiplier: 1

Inst : MSBNA01

Quant Time: Feb 14 08:09:40 2017  
Quant Method : C:\msdchem\1\METHODS\simpahf.m  
Quant Title : PAH's by 8270 SIM  
QLast Update : Tue Feb 14 08:09:11 2017  
Response via : Initial Calibration



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\SW4338\  
 Data File : W097291.D  
 Acq On : 13 Feb 2017 9:49 pm  
 Operator : foudas  
 Sample : icv4338-4  
 Misc : op63755,sw4338,14.9,,,1,1,soil  
 ALS Vial : 93 Sample Multiplier: 1

Inst : MSBNA01

Quant Time: Feb 14 08:14:58 2017  
 Quant Method : C:\msdchem\1\METHODS\simpahf.m  
 Quant Title : PAH's by 8270 SIM  
 QLast Update : Tue Feb 14 08:14:18 2017  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	5.586	136	140501	4.00	ppm	0.00
6) Acenaphthene-d10	7.136	164	77715	4.00	ppm	0.00
13) Phenanthrene-d10	8.459	188	120707	4.00	ppm	0.00
20) Chrysene-d12	11.268	240	87460	4.00	ppm	-0.01
25) Perylene-d12	13.725	264	82840	4.00	ppm	-0.01
System Monitoring Compounds						
2) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount	10.000	Range	40 - 105	Recovery	=	0.00%#
7) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount	10.000	Range	43 - 107	Recovery	=	0.00%#
14) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount	20.000	Range	42 - 108	Recovery	=	0.00%#
22) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount	10.000	Range	45 - 119	Recovery	=	0.00%#
Target Compounds						
						Qvalue
3) Naphthalene	5.605	128	298625	8.76	ppm	100
4) 2-Methylnaphthalene	6.212	142	207951	8.45	ppm	99
5) 1-Methylnaphthalene	6.297	142	208314	9.11	ppm	100
9) Acenaphthylene	7.011	152	346610	9.63	ppm	100
10) Acenaphthene	7.163	153	193759	9.22	ppm	99
11) Dibenzofuran	7.323	168	286328	10.20	ppm	97
12) Fluorene	7.627	166	239430	9.65	ppm	100
15) Pentachlorophenol	8.291	266	54129	17.36	ppm	98
16) Phenanthrene	8.479	178	297750	8.72	ppm	99
17) Anthracene	8.523	178	157737	4.22	ppm	100
18) Carbazole	8.666	167	162446	4.53	ppm	99
19) Fluoranthene	9.556	202	352219	9.62	ppm	99
21) Pyrene	9.783	202	344107	8.90	ppm	98
23) Benzo[a]anthracene	11.253	228	157704	4.64	ppm	99
24) Chrysene	11.307	228	144897	4.80	ppm	99
26) Benzo[b]fluoranthene	13.022	252	135954	4.42	ppm	99
27) Benzo[k]fluoranthene	13.066	252	126441	4.27	ppm	99
28) Benzo[a]pyrene	13.612	252	129255	4.40	ppm	99
29) Indeno[1,2,3-cd]pyrene	15.889	276	112372	4.66	ppm	94
30) Dibenz[a,h]anthracene	15.948	278	100617	4.37	ppm	96
31) Benzo[g,h,i]perylene	16.327	276	116781	4.28	ppm	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

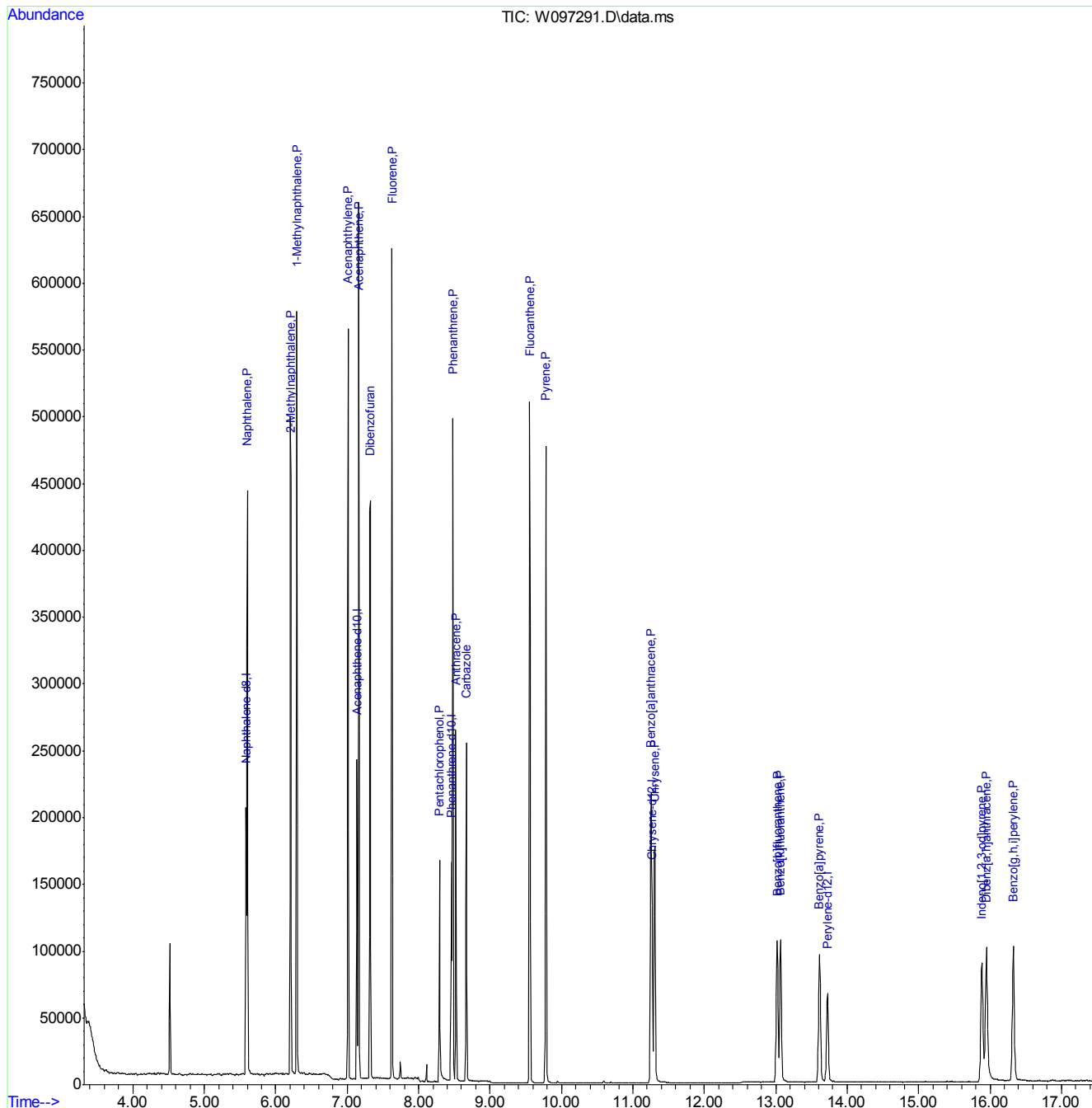


## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\SW4338\  
Data File : W097291.D  
Acq On : 13 Feb 2017 9:49 pm  
Operator : fouads  
Sample : icv4338-4  
Misc : op63755,sw4338,14.9,,,1,1,soil  
ALS Vial : 93 Sample Multiplier: 1

Inst : MSBNA01

Quant Time: Feb 14 08:14:58 2017  
Quant Method : C:\msdchem\1\METHODS\simpahf.m  
Quant Title : PAH's by 8270 SIM  
QLast Update : Tue Feb 14 08:14:18 2017  
Response via : Initial Calibration



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\SW4369\  
 Data File : W098384.D  
 Acq On : 29 Mar 2017 9:40 am  
 Operator : fouads  
 Sample : cc4339-4  
 Misc : op64229,sw4369,15.0,,,1,1,soil  
 ALS Vial : 2 Sample Multiplier: 1

Inst : MSBNA01

Quant Time: Mar 29 09:59:18 2017  
 Quant Method : C:\msdchem\1\METHODS\simpahf.m  
 Quant Title : PAH's by 8270 SIM  
 QLast Update : Thu Mar 02 08:24:54 2017  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	5.534	136	111403	4.00	ppm	0.00
6) Acenaphthene-d10	7.086	164	62852	4.00	ppm	0.00
13) Phenanthrene-d10	8.406	188	104586	4.00	ppm	0.00
20) Chrysene-d12	11.195	240	79334	4.00	ppm	0.00
25) Perylene-d12	13.636	264	71183	4.00	ppm	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	4.921	82	70778	8.90	ppm	0.00
Spiked Amount 10.000	Range 40	- 105	Recovery	=	89.00%	
7) 2-Fluorobiphenyl	6.473	172	179826	9.48	ppm	-0.02
Spiked Amount 10.000	Range 43	- 107	Recovery	=	94.80%	
14) 2,4,6-Tribromophenol	7.792	330	36148	18.73	ppm	0.00
Spiked Amount 20.000	Range 42	- 108	Recovery	=	93.65%	
22) Terphenyl-d14	9.881	244	149250	9.10	ppm	0.00
Spiked Amount 10.000	Range 45	- 119	Recovery	=	91.00%	
Target Compounds						
3) Naphthalene	5.554	128	231569	8.57	ppm	Qvalue 100
4) 2-Methylnaphthalene	6.160	142	177772	9.15	ppm	98
5) 1-Methylnaphthalene	6.245	142	156219	8.61	ppm	96
8) 1,1'-Biphenyl	6.564	154	186490	9.07	ppm	95
9) Acenaphthylene	6.954	152	274229	9.41	ppm	98
10) Acenaphthene	7.107	153	156414	9.21	ppm	96
11) Dibenzofuran	7.266	168	212454	9.32	ppm	# 73
12) Fluorene	7.571	166	193190	9.63	ppm	97
15) Pentachlorophenol	8.243	266	65254	23.80	ppm	99
16) Phenanthrene	8.425	178	266845	9.02	ppm	99
17) Anthracene	8.470	178	144175	4.45	ppm	99
18) Carbazole	8.617	167	143773	4.62	ppm	97
19) Fluoranthene	9.498	202	320041	10.10	ppm	100
21) Pyrene	9.724	202	321172	9.16	ppm	99
23) Benzo[a]anthracene	11.175	228	145753	4.73	ppm	99
24) Chrysene	11.229	228	131025	4.78	ppm	99
26) Benzo[b]fluoranthene	12.932	252	119787	4.53	ppm	99
27) Benzo[k]fluoranthene	12.987	252	116969	4.59	ppm	97
28) Benzo[a]pyrene	13.528	252	114993	4.56	ppm	99
29) Indeno[1,2,3-cd]pyrene	15.810	276	90022	4.34	ppm	94
30) Dibenz[a,h]anthracene	15.864	278	86001	4.35	ppm	97
31) Benzo[g,h,i]perylene	16.253	276	99489	4.25	ppm	99

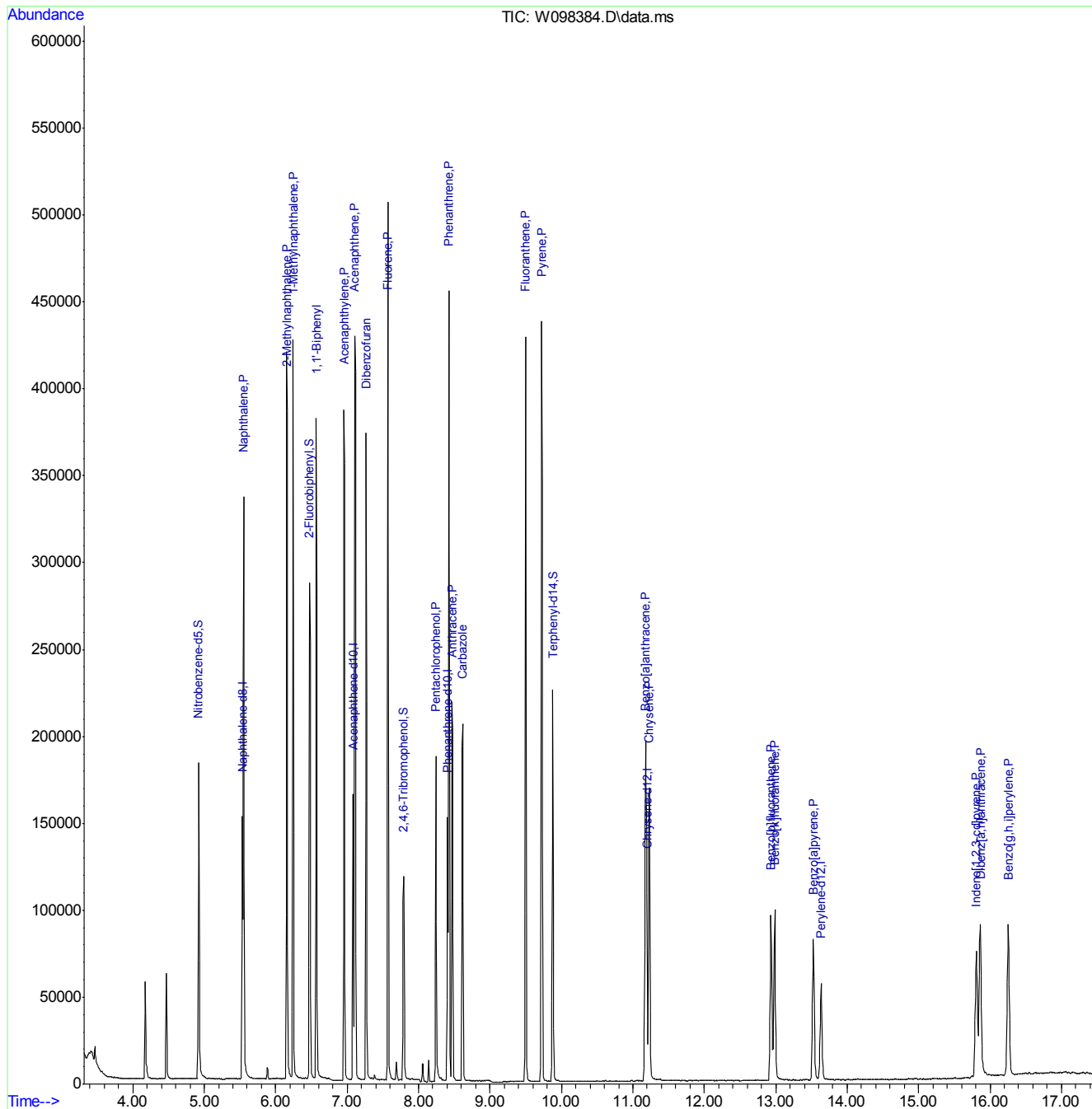
(#) = qualifier out of range (m) = manual integration (+) = signals summed

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\SW4369\  
Data File : W098384.D  
Acq On : 29 Mar 2017 9:40 am  
Operator : fouads  
Sample : cc4339-4  
Misc : op64229,sw4369,15.0,,,1,1,soil  
ALS Vial : 2 Sample Multiplier: 1

Inst : MSBNA01

Quant Time: Mar 29 09:59:18 2017  
Quant Method : C:\msdchem\1\METHODS\simpahf.m  
Quant Title : PAH's by 8270 SIM  
QLast Update : Thu Mar 02 08:24:54 2017  
Response via : Initial Calibration

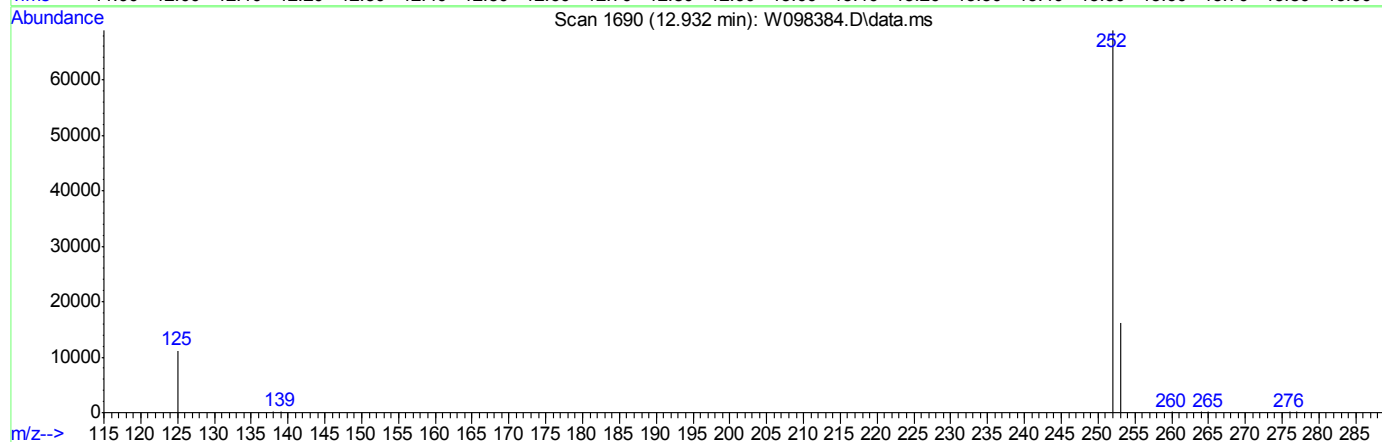
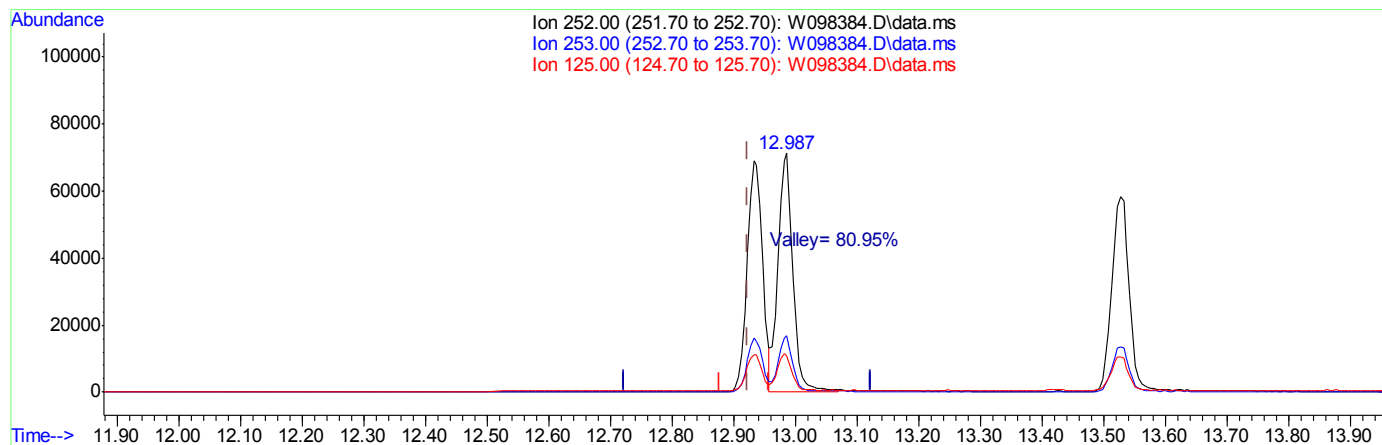


## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\SW4369\  
Data File : W098384.D  
Acq On : 29 Mar 2017 9:40 am  
Operator : fouads  
Sample : cc4339-4  
Misc : op64229,sw4369,15.0,,,1,1,soil  
ALS Vial : 2 Sample Multiplier: 1

Inst : MSBNA01

Quant Time: Mar 29 09:59:18 2017  
Quant Method : C:\msdchem\1\METHODS\simpahf.m  
Quant Title : PAH's by 8270 SIM  
QLast Update : Thu Mar 02 08:24:54 2017  
Response via : Initial Calibration



TIC: W098384.D\data.ms

(26) Benzo[b]fluoranthene (P)

12.932min (+0.009) 4.53ppm

response 119787

Ion	Exp%	Act%
252.00	100	100
253.00	23.30	23.26
125.00	16.80	15.78
0.00	0.00	0.00

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\SW4369\  
 Data File : W098415.D  
 Acq On : 29 Mar 2017 9:32 pm  
 Operator : foudas  
 Sample : ecc4339-4 Inst : MSBNA01  
 Misc : op64357,sw4369,30.3,,,1,2,soil  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 30 09:25:37 2017  
 Quant Method : C:\msdchem\1\METHODS\simpahf.m  
 Quant Title : PAH's by 8270 SIM  
 QLast Update : Thu Mar 02 08:24:54 2017  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	5.535	136	103068	4.00	ppm	0.00
6) Acenaphthene-d10	7.079	164	57818	4.00	ppm	-0.01
13) Phenanthrene-d10	8.401	188	94138	4.00	ppm	-0.01
20) Chrysene-d12	11.185	240	73470	4.00	ppm	-0.01
25) Perylene-d12	13.626	264	70722	4.00	ppm	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	4.916	82	71141	9.67	ppm	-0.02
Spiked Amount 10.000	Range 40 - 105		Recovery =	96.70%		
7) 2-Fluorobiphenyl	6.474	172	164607	9.43	ppm	-0.02
Spiked Amount 10.000	Range 43 - 107		Recovery =	94.30%		
14) 2,4,6-Tribromophenol	7.786	330	34844	20.05	ppm	-0.01
Spiked Amount 20.000	Range 42 - 108		Recovery =	100.25%		
22) Terphenyl-d14	9.877	244	134611	8.86	ppm	0.00
Spiked Amount 10.000	Range 45 - 119		Recovery =	88.60%		
Target Compounds						
					Qvalue	
3) Naphthalene	5.548	128	218720	8.75	ppm	98
4) 2-Methylnaphthalene	6.154	142	167009	9.30	ppm	91
5) 1-Methylnaphthalene	6.239	142	150949	9.00	ppm	97
8) 1,1'-Biphenyl	6.565	154	175629	9.30	ppm	98
9) Acenaphthylene	6.955	152	251720	9.39	ppm	99
10) Acenaphthene	7.107	153	143772	9.20	ppm	99
11) Dibenzofuran	7.266	168	203889	9.74	ppm	93
12) Fluorene	7.571	166	183278	9.94	ppm	98
15) Pentachlorophenol	8.239	266	57475	23.31	ppm	98
16) Phenanthrene	8.421	178	236017	8.86	ppm	100
17) Anthracene	8.470	178	130644	4.48	ppm	99
18) Carbazole	8.613	167	126657	4.52	ppm	99
19) Fluoranthene	9.493	202	273610	9.58	ppm	99
21) Pyrene	9.719	202	274752	8.46	ppm	98
23) Benzo[a]anthracene	11.170	228	132152	4.63	ppm	99
24) Chrysene	11.224	228	120573	4.75	ppm	100
26) Benzo[b]fluoranthene	12.922	252	118473	4.51	ppm	99
27) Benzo[k]fluoranthene	12.977	252	117282	4.63	ppm	97
28) Benzo[a]pyrene	13.518	252	114211	4.56	ppm	98
29) Indeno[1,2,3-cd]pyrene	15.795	276	88510	4.30	ppm	94
30) Dibenz[a,h]anthracene	15.854	278	84546	4.30	ppm	98
31) Benzo[g,h,i]perylene	16.248	276	92338	3.97	ppm	93

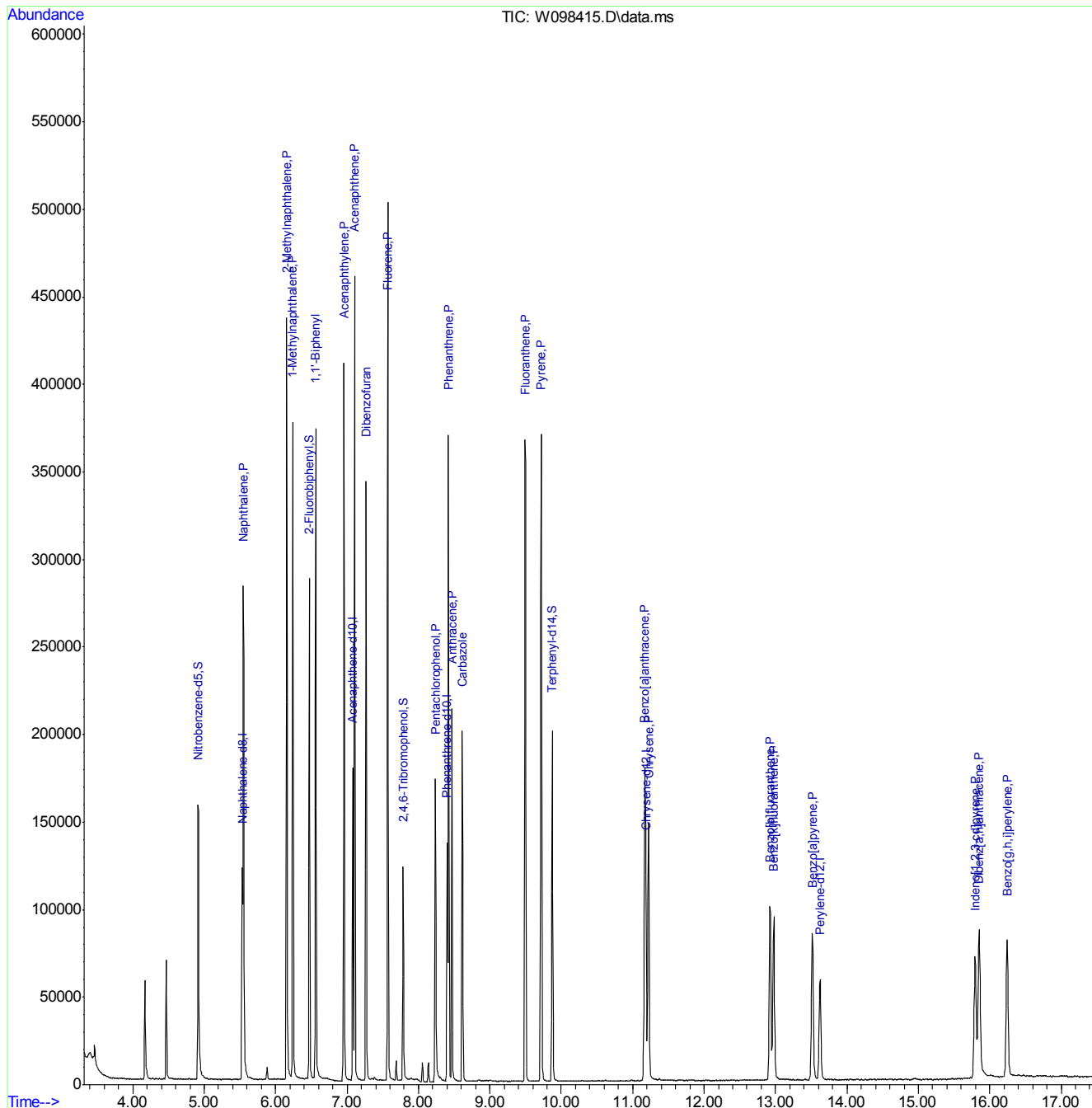
(#) = qualifier out of range (m) = manual integration (+) = signals summed

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\SW4369\  
Data File : W098415.D  
Acq On : 29 Mar 2017 9:32 pm  
Operator : fouads  
Sample : ecc4339-4  
Misc : op64357,sw4369,30.3,,,1,2,soil  
ALS Vial : 2 Sample Multiplier: 1

Inst : MSBNA01

Quant Time: Mar 30 09:25:37 2017  
Quant Method : C:\msdchem\1\METHODS\simpahf.m  
Quant Title : PAH's by 8270 SIM  
QLast Update : Thu Mar 02 08:24:54 2017  
Response via : Initial Calibration



## SGS ACCUTEST-ORLANDO

DATE:	02/13/17
COLUMN TYPE:	92201
AMOUNT INJECTED:	2 ul
INSTRUMENT:	MSBNA01-W

## MS BNA01-W ANALYSIS LOG

METHODS:	8220 SIMPAA
ACQ. METHOD:	FASTPAAH
PROC. METHOD:	SIMPAAH
CALIB. DATE:	01-24-17/02/17
RUN BATCH:	SW 4338/4339

ANALYST:	FS
MECL2 LOT #:	165140
DFTTP RESPONSE:	1598818
EM VOLTAGE:	2141/1882
ISTD Lot #:	55632

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	COMMENTS
W 097269	1	dFTTP	dFTTP	5568	x/		TUNE PAGE 1
W 70	1	dFTTP					
W 71	2	LC4324-4	8220	5569	100300		ccv page 1 of 28, 77, 30
W 72	3	063693-B5		063693	x/		
W 73	4	F40943-5			x/4		✓ kept method, 2 set
W 74	5	8112					NA
W 76	1	dFTTP	dFTTP	5569			
W 77	1						
W 78	2	LC4324-4	8220				
W 79		dFTTP	dFTTP		x/		
W 80							
W 81							
W 82		dFTTP		5569			TUNE PAGE 1
W 83		LC4324-4	8220	5569	100300		ccv page 1
W 84		LC4338-1		5569	51499 (100300)		
W 85		LC4339-2			201980 (100300)		
W 86		LC4339-3			504350 (100300)		
W 87		LC4338-4			100300 (100300)		
W 88		LC4339-5			1501250 (100300)		
W 89		LC4339-6			100300 (100300)		
W 90		LC4339-7			x/		

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline R  
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

msbna01\_w\_log.xls ME rev. 06/16

38 of 100

Analyst's Signature

(b) (6)

## MS BNA01-W ANALYSIS LOG

METHODS: 8220 S/N 41474  
ACQ. METHOD: FMT-001H  
PROC. METHOD: 814901H  
CALIB. DATE: 8-24-2007 02:15  
RUN BATCH: SW142324 0230

ANALYST: F-3  
MECL2 LOT #: 165140  
DFTTP RESPONSE: 1572818  
EM VOLTAGE: 1882  
ISTD Lot #: 55632

[illegible]

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

msbna01\_w log.xls ME rev. 06/16

Analyst's Signat

39 of 100

(b) (6)

## 7.7.1



SGS ACCUTEST-ORLANDO

DATE: 03/29/17
COLUMN TYPE: 8220
AMOUNT INJECTED: 2 ul
INSTRUMENT: MSBNA01-W

MS BNA01-W ANALYSIS LOG

METHODS: 8220 SMPH
ACQ. METHOD: FID PMA SP
PROC. METHOD: SMPH SP
CALIB. DATE: 02/13/17
RUN BATCH: SW 4369

ANALYST: F.S
MECL2 LOT #: 165140
DFTPP RESPONSE: 2394323
EM VOLTAGE: 1765
ISTD Lot #: 55643

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	COMMENTS
W 098383	1	dfpp	dfpp	55645	x1		Tune point
W 84	2	224337-4	8220	55605	101300		ccv passed
W 85	3	064355-B5		064355	x10		-
W 86	4	064356-B5		064356	x10		-
W 87	5	064357-mb		064357	x1		N2
W 88	6	-B5		-	x10		-
W 89	7	064367-mb		064367	x1		ND
W 90	8	-B5					-
W 91	9	F.42152-1					-
W 92	10	-2					-
W 93	11	-3					-
W 94	12	-4					-
W 95	13	-5					-
W 96	14	-6					-
W 97	15	-7					-
W 98	16	-8					-
W 99	17	-MS					-
W 098490	18	-MSD					-
W 01	19	-9					-
W 02	20	F.42306-1					ND
W 03	21	-2					ND

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline  
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

msbna01\_w\_log.xls ME rev. 06/16

Analyst's Sig

7 of 100

(b) (6)

7.7.2

## MS BNA01-W ANALYSIS LOG

METHODS: 8220 SIMP  
ACQ. METHOD: FAST-PCR SP  
PROC. METHOD: SIMP  
CALIB. DATE: 02/13/17  
RUN BATCH: SW 4369

ANALYST: P.S.  
MECL2 LOT #: 165140  
DFTPP RESPONSE: 239 4325  
EM VOLTAGE: 1765  
ISTD Lot #: 55648

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	COMMENTS
W098404	22	F.42306-3	82200	0014867	x1		-
W	23	F.42323-1					-
W	24	-2					-
W	25	F.42290-1					-
W	26	F.42301-1					R.2.5x MATC
W	27	-2					
W	28	F.41334-15R		0014357	x2		-
W	29	-MS					-
W	30	-MSD					-
W	31	-16R					-
W	32	-17R					-
W	33						
W	34						
W	35						
W	36						
W	37						
W	38						
W	39						
W	40						
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Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration  
All strikeouts must be initiated and dated. If correction was not due to a transcription error, then list the reason for correction.

Analyst's Signature: \_\_\_\_\_

msbna01 w log.xls ME rev. 06/16

8 of 100

## SGS ACCUTEST - ORLANDO

## SOLID SAMPLE PREP REPORT

Date/Time: 03/28/17 08:30  
Started (mm/dd/yy 24:00)Prep Method: (3550C) 3580A or Method (circle)Date/Time: 03/28/17 10:26  
Finished (mm/dd/yy 24:00)Batch#: OP64367Analytical Method: 8270SIMExt. By: AAConc. By: AEViald By: AEBalance ID: ADVPro 8

Sample ID	Bottle Number	Amount Extracted (g)	Surrogate Amount	Spike Amount	Final Volume (ml)	Comments
OP64367 MB	X	15.0	0.1ml		1.0ml	
OP64367 BS	X	15.0		0.5ml		
FA42152-1	1	15.0				
-2	1	15.2				
-3	1	15.1				
-4	1	15.1				
-5	1	15.0				
-6	1	15.0				
-7	1	15.2				
-8	1	15.0				MS/MSD
-9	1	15.0				
FA42306-1	5	15.1				
-2	5	15.2				
-3	5	15.5				
FA42323-1	8	15.4				
-2	9	15.3				
FA42290-1	6	15.4	↓		↓	ROCKS
-2						
FA42301-1	6	15.2	0.1ml		1.0ml	
-2	5	15.2	↓		↓	
FA42152-8 MS	1	15.0	0.1ml	0.5ml	1.0ml	
-8 MSD	1	15.6	↓	↓	↓	
DUP						

## Comments:

Surr. ID: ES840-H Conc: 200/100 PPM Exp. Date: 09/10/17 Inj. By: AA Ver. By: BAA  
 Spk. ID: ES789A Conc: 2c/100 PPM Exp. Date: 06/21/17 Inj. By: AA Ver. By: BAA

Initial Bath Temp (Therm ID): TU #10 Exchange Bath/N-Evap Temp (Therm ID): —  
 Observed Temp °C: 45°C Corr. Temp °C: — Observed Temp °C: — Corr. Temp °C: —

CH<sub>2</sub>Cl<sub>2</sub> Lot # 170232 Hexane Lot # — Na<sub>2</sub>SO<sub>4</sub> Lot # SS2203  
 Acetonitrile Lot # — Methanol Lot # — Acetone Lot # —  
 Syringe Filter Lot # — Filter Paper # 9685449 Reagent # —  
 Copper Lot # — If Sulfur Cleaning is performed in Extractions (3660B)

Relinquish

Accepted

Date: 03/28/17Date: 3/28/17

## GC Semi-volatiles

## QC Data Summaries

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Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries
- Initial and Continuing Calibration Summaries

**Method Blank Summary**

Page 1 of 1

**Job Number:** FA42152**Account:** CAPEGAA Cape Environmental Management Inc.**Project:** OB/OD Site I, OB Site II, Fort Bliss, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP64396-MB	BB053976.D	1	03/31/17	EM	03/29/17	OP64396	GBB1567

**The QC reported here applies to the following samples:****Method:** SW846 8330B

FA42152-1, FA42152-2, FA42152-3, FA42152-9

CAS No.	Compound	Result	RL	MDL	Units	Q
2691-41-0	HMX	ND	100	51	ug/kg	
121-82-4	RDX	ND	100	50	ug/kg	
99-65-0	1,3-Dinitrobenzene	ND	100	50	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	100	50	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	100	50	ug/kg	
35572-78-2	2-amino-4,6-Dinitrotoluene	ND	100	50	ug/kg	
19406-51-0	4-amino-2,6-Dinitrotoluene	ND	100	51	ug/kg	
98-95-3	Nitrobenzene	ND	100	50	ug/kg	
88-72-2	o-Nitrotoluene	ND	100	50	ug/kg	
99-08-1	m-Nitrotoluene	ND	100	50	ug/kg	
99-99-0	p-Nitrotoluene	ND	100	50	ug/kg	
479-45-8	Tetryl	ND	100	50	ug/kg	
99-35-4	1,3,5-Trinitrobenzene	ND	100	50	ug/kg	
118-96-7	2,4,6-Trinitrotoluene	ND	100	50	ug/kg	
55-63-0	Nitroglycerine	ND	1000	250	ug/kg	
78-11-5	PETN	ND	1000	250	ug/kg	

CAS No.	Surrogate Recoveries	Limits
610-39-9	3,4-Dinitrotoluene	81% 69-134%

**Blank Spike Summary**

Page 1 of 1

**Job Number:** FA42152**Account:** CAPEGAA Cape Environmental Management Inc.**Project:** OB/OD Site I, OB Site II, Fort Bliss, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP64396-BS	BB054004.D	1	04/03/17	EM	03/29/17	OP64396	GBB1569

**The QC reported here applies to the following samples:****Method:** SW846 8330B

FA42152-1, FA42152-2, FA42152-3, FA42152-9

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
2691-41-0	HMX	2500	2440	98	75-147
121-82-4	RDX	2500	1970	79	79-126
99-65-0	1,3-Dinitrobenzene	2500	2040	82	77-131
606-20-2	2,6-Dinitrotoluene	2500	2140	86	81-134
121-14-2	2,4-Dinitrotoluene	2500	2110	84	81-128
35572-78-2	2-amino-4,6-Dinitrotoluene	2500	2260	90	81-127
19406-51-0	4-amino-2,6-Dinitrotoluene	2500	2030	81	74-125
98-95-3	Nitrobenzene	2500	2290	92	79-135
88-72-2	o-Nitrotoluene	2500	2290	92	79-130
99-08-1	m-Nitrotoluene	2500	2640	106	79-132
99-99-0	p-Nitrotoluene	2500	2310	92	79-134
479-45-8	Tetryl	2500	1980	79	67-130
99-35-4	1,3,5-Trinitrobenzene	2500	2120	85	79-134
118-96-7	2,4,6-Trinitrotoluene	2500	1770	71	70-123
55-63-0	Nitroglycerine	12500	12000	96	73-121
78-11-5	PETN	12500	11700	94	74-140

CAS No.	Surrogate Recoveries	BSP	Limits
610-39-9	3,4-Dinitrotoluene	87%	69-134%

\* = Outside of Control Limits.

## Laboratory Control Sample Summary

Page 1 of 1

Job Number: FA42152

Account: CAPEGAA Cape Environmental Management Inc.

Project: OB/OD Site I, OB Site II, Fort Bliss, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP64396-PT1	BB054005.D	1	04/03/17	EM	03/29/17	OP64396	GBB1569

The QC reported here applies to the following samples:

Method: SW846 8330B

FA42152-1, FA42152-2, FA42152-3, FA42152-9

CAS No.	Compound	Spike ug/kg	LCS ug/kg	LCS %	Limits
2691-41-0	HMX	620	530	85	74-124
121-82-4	RDX	587	407	69	67-129
99-65-0	1,3-Dinitrobenzene	1010	838	83	73-119
606-20-2	2,6-Dinitrotoluene	1320	1100	83	79-117
121-14-2	2,4-Dinitrotoluene	638	486	76	75-121
35572-78-2	2-amino-4,6-Dinitrotoluene	650	476	73	71-123
19406-51-0	4-amino-2,6-Dinitrotoluene	947	511	54*	64-127
98-95-3	Nitrobenzene	1400	1060	76	67-129
88-72-2	o-Nitrotoluene	1460	1090	75	70-124
99-08-1	m-Nitrotoluene	1020	1140	112	67-129
99-99-0	p-Nitrotoluene	1830	1570	86	71-124
479-45-8	Tetryl	2000	372	19*	68-135
99-35-4	1,3,5-Trinitrobenzene	701	591	84	80-116
118-96-7	2,4,6-Trinitrotoluene	808	515	64*	71-120
55-63-0	Nitroglycerine	1000	807	81	73-124
78-11-5	PETN	1000	989	99	72-128

CAS No.	Surrogate Recoveries	BSP	Limits
610-39-9	3,4-Dinitrotoluene	0%* a	69-134%

(a) Not added.

\* = Outside of Control Limits.

## Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: FA42152

Account: CAPEGAA Cape Environmental Management Inc.

Project: OB/OD Site I, OB Site II, Fort Bliss, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP64396-MS	BB053980.D	1	03/31/17	EM	03/29/17	OP64396	GBB1567
OP64396-MSD	BB053981.D	1	03/31/17	EM	03/29/17	OP64396	GBB1567
FA42152-1	BB053979.D	1	03/31/17	EM	03/29/17	OP64396	GBB1567

The QC reported here applies to the following samples:

Method: SW846 8330B

FA42152-1, FA42152-2, FA42152-3, FA42152-9

CAS No.	Compound	FA42152-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
2691-41-0	HMX	99 U		2500	2030	81	2500	1950	78	4	75-147/22
121-82-4	RDX	99 U		2500	1870	75*	2500	2000	80	7	79-126/21
99-65-0	1,3-Dinitrobenzene	99 U		2500	1880	75*	2500	1930	77	3	77-131/15
606-20-2	2,6-Dinitrotoluene	99 U		2500	1980	79*	2500	2020	81	2	81-134/20
121-14-2	2,4-Dinitrotoluene	99 U		2500	1990	80*	2500	2040	82	2	81-128/17
35572-78-2	2-amino-4,6-Dinitrotoluene	99 U		2500	2070	83	2500	2110	84	2	81-127/15
19406-51-0	4-amino-2,6-Dinitrotoluene	99 U		2500	2000	80	2500	2040	82	2	74-125/23
98-95-3	Nitrobenzene	99 U		2500	2050	82	2500	2070	83	1	79-135/16
88-72-2	o-Nitrotoluene	99 U		2500	2030	81	2500	2100	84	3	79-130/17
99-08-1	m-Nitrotoluene	99 U		2500	2000	80	2500	2060	82	3	79-132/20
99-99-0	p-Nitrotoluene	99 U		2500	2070	83	2500	2120	85	2	79-134/22
479-45-8	Tetryl	99 UJ	J	2500	3570	143* <sup>a</sup>	2500	3640	146* <sup>a</sup>	2	67-130/19
99-35-4	1,3,5-Trinitrobenzene	99 UJ	J	2500	1690	68* <sup>a</sup>	2500	1730	69* <sup>a</sup>	2	79-134/17
118-96-7	2,4,6-Trinitrotoluene	99 UJ	J	2500	3070	123 <sup>a</sup>	2500	3110	124* <sup>a</sup>	1	70-123/16
55-63-0	Nitroglycerine	990 U		12500	11200	90	12500	11400	91	2	73-121/15
78-11-5	PETN	990 U		12500	11900	95	12500	12000	96	1	74-140/16

CAS No.	Surrogate Recoveries	MS	MSD	FA42152-1	Limits
610-39-9	3,4-Dinitrotoluene	87%	87%	81%	69-134%

(a) Outside DoD QSM control limits.

\* = Outside of Control Limits.



**Duplicate Summary**

Page 1 of 1

**Job Number:** FA42152**Account:** CAPEGAA Cape Environmental Management Inc.**Project:** OB/OD Site I, OB Site II, Fort Bliss, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP64396-DUP	BB053984.D	1	03/31/17	EM	03/29/17	OP64396	GBB1567
FA42152-3	BB053983.D	1	03/31/17	EM	03/29/17	OP64396	GBB1567

**The QC reported here applies to the following samples:****Method:** SW846 8330B

FA42152-1, FA42152-2, FA42152-3, FA42152-9

CAS No.	Compound	FA42152-3 ug/kg	DUP Q	ug/kg	Q	RPD	Limits
2691-41-0	HMX	100 U		ND		nc	22
121-82-4	RDX	100 U		ND		nc	21
99-65-0	1,3-Dinitrobenzene	100 U		ND		nc	15
606-20-2	2,6-Dinitrotoluene	100 U		ND		nc	20
121-14-2	2,4-Dinitrotoluene	100 U		ND		nc	17
35572-78-2	2-amino-4,6-Dinitrotoluene	100 U		ND		nc	15
19406-51-0	4-amino-2,6-Dinitrotoluene	100 U		ND		nc	23
98-95-3	Nitrobenzene	100 U		ND		nc	16
88-72-2	o-Nitrotoluene	100 U		ND		nc	17
99-08-1	m-Nitrotoluene	100 U		ND		nc	20
99-99-0	p-Nitrotoluene	100 U		ND		nc	22
479-45-8	Tetryl	100 U		ND		nc	19
99-35-4	1,3,5-Trinitrobenzene	100 U		ND		nc	17
118-96-7	2,4,6-Trinitrotoluene	100 U		ND		nc	16
55-63-0	Nitroglycerine	1000 U		ND		nc	15
78-11-5	PETN	1000 U		ND		nc	16

CAS No.	Surrogate Recoveries	DUP	FA42152-3	Limits
610-39-9	3,4-Dinitrotoluene	85%	84%	69-134%

\* = Outside of Control Limits.

**Duplicate Summary**

Page 1 of 1

**Job Number:** FA42152**Account:** CAPEGAA Cape Environmental Management Inc.**Project:** OB/OD Site I, OB Site II, Fort Bliss, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP64396-DUP2	BB053985.D	1	03/31/17	EM	03/29/17	OP64396	GBB1567
FA42152-3	BB053983.D	1	03/31/17	EM	03/29/17	OP64396	GBB1567

**The QC reported here applies to the following samples:****Method:** SW846 8330B

FA42152-1, FA42152-2, FA42152-3, FA42152-9

CAS No.	Compound	FA42152-3 ug/kg	DUP Q	ug/kg	Q	RPD	Limits
2691-41-0	HMX	100 U		ND		nc	22
121-82-4	RDX	100 U		ND		nc	21
99-65-0	1,3-Dinitrobenzene	100 U		ND		nc	15
606-20-2	2,6-Dinitrotoluene	100 U		ND		nc	20
121-14-2	2,4-Dinitrotoluene	100 U		ND		nc	17
35572-78-2	2-amino-4,6-Dinitrotoluene	100 U		ND		nc	15
19406-51-0	4-amino-2,6-Dinitrotoluene	100 U		ND		nc	23
98-95-3	Nitrobenzene	100 U		ND		nc	16
88-72-2	o-Nitrotoluene	100 U		ND		nc	17
99-08-1	m-Nitrotoluene	100 U		ND		nc	20
99-99-0	p-Nitrotoluene	100 U		ND		nc	22
479-45-8	Tetryl	100 U		ND		nc	19
99-35-4	1,3,5-Trinitrobenzene	100 U		ND		nc	17
118-96-7	2,4,6-Trinitrotoluene	100 U		ND		nc	16
55-63-0	Nitroglycerine	1000 U		ND		nc	15
78-11-5	PETN	1000 U		ND		nc	16

CAS No.	Surrogate Recoveries	DUP	FA42152-3	Limits
610-39-9	3,4-Dinitrotoluene	82%	84%	69-134%

\* = Outside of Control Limits.

## Semivolatile Surrogate Recovery Summary

Page 1 of 1

**Job Number:** FA42152

**Account:** CAPEGAA Cape Environmental Management Inc.

**Project:** OB/OD Site I, OB Site II, Fort Bliss, TX

**Method:** SW846 8330B

**Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 <sup>a</sup>
FA42152-1	BB053979.D	81
FA42152-2	BB053982.D	81
FA42152-3	BB053983.D	84
FA42152-9	BB053986.D	84
OP64396-BS	BB054004.D	87
OP64396-DUP	BB053984.D	85
OP64396-DUP2	BB053985.D	82
OP64396-MB	BB053976.D	81
OP64396-MS	BB053980.D	87
OP64396-MSD	BB053981.D	87
OP64396-PT1	BB054005.D	0* <sup>b</sup>

Surrogate Compounds	Recovery Limits
------------------------	--------------------

S1 = 3,4-Dinitrotoluene	69-134%
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(a) Recovery from GC signal #1

(b) Not added.

8.6.1

8

## GC Surrogate Retention Time Summary

Page 1 of 1

**Job Number:** FA42152

**Account:** CAPEGAA Cape Environmental Management Inc.

**Project:** OB/OD Site I, OB Site II, Fort Bliss, TX

**Check Std:** GBB1567-CC1564

**Injection Date:** 03/30/17

**Lab File ID:** BB053965.D

**Injection Time:** 20:27

**Instrument ID:** GCBB

**Method:** SW846 8330B

**S1<sup>a</sup>**

**RT**

Check Std

11.14

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 <sup>a</sup> RT
OP64400-BS	BB053969.D	03/30/17	22:27	11.15
OP64400-MB	BB053970.D	03/30/17	22:57	11.15
FA42448-1	BB053971.D	03/30/17	23:27	11.15
OP64400-MS	BB053972.D	03/30/17	23:57	11.14
OP64400-MSD	BB053973.D	03/31/17	00:27	11.13
OP64396-MB	BB053976.D	03/31/17	01:57	11.14

### Surrogate Compounds

S1 = 3,4-Dinitrotoluene

(a) Retention time from GC signal #1

# GC Surrogate Retention Time Summary

Page 1 of 1

**Job Number:** FA42152  
**Account:** CAPEGAA Cape Environmental Management Inc.  
**Project:** OB/OD Site I, OB Site II, Fort Bliss, TX

<b>Check Std:</b> GBB1567-CC1564	<b>Injection Date:</b> 03/31/17
<b>Lab File ID:</b> BB053977.D	<b>Injection Time:</b> 02:27
<b>Instrument ID:</b> GCBB	<b>Method:</b> SW846 8330B

<b>S1<sup>a</sup></b>	<b>S1<sup>b</sup></b>
<b>RT</b>	<b>RT</b>

Check Std	11.11	11.11
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Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 <sup>a</sup> RT	S1 <sup>b</sup> RT
FA42152-1	BB053979.D	03/31/17	03:27		11.13
OP64396-MS	BB053980.D	03/31/17	03:57		11.12
OP64396-MSD	BB053981.D	03/31/17	04:27		11.12
FA42152-2	BB053982.D	03/31/17	04:57		11.12
FA42152-3	BB053983.D	03/31/17	05:27		11.12
OP64396-DUP	BB053984.D	03/31/17	05:57		11.12
OP64396-DUP2	BB053985.D	03/31/17	06:27		11.12
FA42152-9	BB053986.D	03/31/17	06:57		11.12
GBB1567-ECC1564	BB053989.D	03/31/17	09:03	11.11	11.11

## Surrogate Compounds

S1 = 3,4-Dinitrotoluene

(a) Retention time from GC signal #2

(b) Retention time from GC signal #1

## GC Surrogate Retention Time Summary

Page 1 of 1

**Job Number:** FA42152

**Account:** CAPEGAA Cape Environmental Management Inc.

**Project:** OB/OD Site I, OB Site II, Fort Bliss, TX

<b>Check Std:</b>	GBB1569-CC1568	<b>Injection Date:</b>	04/03/17
<b>Lab File ID:</b>	BB054003.D	<b>Injection Time:</b>	08:40
<b>Instrument ID:</b>	GCB	<b>Method:</b>	SW846 8330B

S1<sup>a</sup>  
RT

Check Std	11.07
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Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 <sup>a</sup> RT
OP64396-BS	BB054004.D	04/03/17	09:22	11.10
OP64396-PT1	BB054005.D	04/03/17	09:52	0.00

### Surrogate Compounds

S1 = 3,4-Dinitrotoluene

(a) Retention time from GC signal #1

**Initial Calibration Summary**

Page 1 of 2

**Job Number:** FA42152  
**Account:** CAPEGAA Cape Environmental Management Inc.  
**Project:** OB/OD Site I, OB Site II, Fort Bliss, TX

**Sample:** GBB1564-ICC1564  
**Lab FileID:** BB053784.D

## Response Factor Report G1315B

Method : D:\MSDCHEM\1\METHODS\8330B\_0324PLUS.M (Chemstation Integrator)  
 Title : Explosives by 8330A,8330B,8332  
 Last Update : Mon Mar 27 10:20:22 2017  
 Response via : Initial Calibration

## Calibration Files

20 =BB053780.D 50 =BB053781.D 100 =BB053782.D 200 =BB053783.D  
 500 =BB053784.D 1000=BB053785.D 2000=BB053786.D

Compound	20	50	100	200	500	1000	2000	Avg	%RSD
1) TNX	2.991	3.172	3.288	3.385	3.254	3.355	3.355	3.257 E3	4.24
2) HMX	1.953	1.945	1.886	1.957	1.750	1.746	1.809	1.864 E3	5.07
3) DNX	2.949	2.993	3.051	3.027	2.824	2.842	2.928	2.945 E3	2.98
4) MNX	2.143	2.116	2.365	2.325	2.323	2.326	2.369	2.281 E3	4.62
5) RDX	2.186	2.128	2.097	1.955	1.889	1.907	1.932	2.014 E3	5.97
6) 1,3,5-Trinitroben	5.132	4.937	5.091	5.237	4.884	4.950	5.069	5.043 E3	2.48
7) 1,3-Dinitrobenzen	5.667	5.908	5.901	5.788	5.438	5.514	5.628	5.692 E3	3.21
8) 3,5-Dinitroanilin	8.828	5.152	4.757	4.648	4.223	4.246	4.298	5.165 E3	31.95
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9998									
Response Ratio = 0.00000 + 4257.05486 *A + 0.01852 *A^2									
9) Nitrobenzene	3.403	3.635	3.554	3.433	3.268	3.339	3.329	3.423 E3	3.82
10) Nitroglycerin								0.000	-1.00
11) Tetryl	1.524	1.545	1.760	1.653	1.524	1.541	1.552	1.586 E3	5.60
12) 2,4,6-Trinitrotol	1.698	2.406	2.399	2.361	2.179	2.201	2.222	2.209 E3	11.09
13) 2-Amino-4,6-Dinit	3.209	3.689	3.568	3.635	3.378	3.445	3.498	3.489 E3	4.69
14) 4-Amino-2,6-Dinit	2.113	2.710	2.711	2.582	2.402	2.463	2.490	2.496 E3	8.28
15)S 3,4-Dinitrotoluen	2.356	2.736	2.634	2.496	2.308	2.316	2.340	2.455 E3	6.99
16) 2,4-Dinitrotoluen	4.868	5.706	5.419	5.243	4.887	4.977	5.044	5.163 E3	6.02
17) 2,6-Dinitrotoluen	3.472	3.224	3.143	3.075	2.823	2.852	2.882	3.067 E3	7.70
18) o-Nitrotoluene	2.992	2.384	2.430	2.400	2.302	2.366	2.370	2.464 E3	9.59
19) p-Nitrotoluene	3.819	3.333	3.651	3.737	3.525	3.639	3.659	3.623 E3	4.33
20) m-Nitrotoluene	3.953	3.659	3.752	3.704	3.474	3.562	3.568	3.667 E3	4.29
21) PETN								0.000	-1.00

## Signal #2

1) TNX	5.193	5.062	5.209	5.264	5.068	5.213	5.198	5.172 E3	1.49
2) HMX	8.494	5.260	5.578	5.601	4.811	4.789	4.946	5.640 E3	23.10
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9997									
Response Ratio = 0.00000 + 4786.35779 *A + 0.07566 *A^2									
3) DNX	5.308	4.571	4.961	4.937	4.550	4.551	4.687	4.795 E3	5.97
4) MNX	3.494	3.482	3.761	3.724	3.616	3.641	3.714	3.633 E3	3.06
5) RDX	3.267	3.229	3.314	3.207	3.065	3.067	3.126	3.182 E3	3.08
6) 1,3,5-Trinitroben	0.964	0.957	0.979	1.003	0.951	0.969	0.990	0.973 E4	1.89
7) 1,3-Dinitrobenzen	4.093	3.745	3.826	4.012	3.809	3.831	3.987	3.900 E3	3.31
8) 3,5-Dinitroanilin	1.536	0.781	0.777	0.776	0.721	0.727	0.758	0.868 E4	34.04
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9999									
Response Ratio = 0.00000 + 7104.91158 *A + 0.23293 *A^2									
9) Nitrobenzene	3.097	2.856	3.257	3.303	3.076	3.166	3.421	3.168 E3	5.78
10) Nitroglycerin	1.299	1.256	1.300	1.342	1.228	1.291	1.295	1.287 E3	2.81
11) Tetryl	1.776	2.376	2.343	2.521	2.286	2.523	2.554	2.340 E3	11.50
12) 2,4,6-Trinitrotol	3.202	3.302	3.010	3.606	3.334	3.321	3.381	3.308 E3	5.45
13) 2-Amino-4,6-Dinit	5.100	4.672	4.687	5.332	5.095	5.189	5.323	5.057 E3	5.43
14) 4-Amino-2,6-Dinit	3.333	3.932	4.512	4.902	4.862	4.992	5.128	4.523 E3	14.59

# Initial Calibration Summary

Page 2 of 2

**Job Number:** FA42152  
**Account:** CAPEGAA Cape Environmental Management Inc.  
**Project:** OB/OD Site I, OB Site II, Fort Bliss, TX

**Sample:** GBB1564-ICC1564  
**Lab FileID:** BB053784.D

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15)	S 3,4-Dinitrotoluen	2.551	0.920	3.672	4.039	3.992	4.064	4.199	3.348	E3	36.10
	---- Quadratic regr., Force(0,0) ----	Coefficient = 0.9997									
	Response Ratio =	0.00000 + 3909.57711 *A + 0.14524 *A^2									
16)	2,4-Dinitrotoluen	2.792	3.017	3.221	3.335	3.225	3.265	3.348	3.172	E3	6.30
17)	2,6-Dinitrotoluen	3.187	3.520	3.696	3.870	3.601	3.677	3.749	3.614	E3	6.04
18)	o-Nitrotoluene	3.520	3.253	3.200	3.368	3.100	3.237	3.250	3.275	E3	4.09
19)	p-Nitrotoluene	2.588	2.392	2.529	2.739	2.749	2.896	3.043	2.705	E3	8.22
20)	m-Nitrotoluene	3.648	3.084	4.102	3.974	4.114	4.245	4.200	3.909	E3	10.60
21)	PETN	1.285	1.211	1.290	1.367	1.324	1.338	1.369	1.312	E3	4.23

---

(#) = Out of Range

8330B\_0324PLUS.M

Wed Mar 29 11:27:29 2017

8.8.1

8



## Initial Calibration Verification

Page 1 of 2

Job Number: FA42152  
 Account: CAPEGAA Cape Environmental Management Inc.  
 Project: OB/OD Site I, OB Site II, Fort Bliss, TX

Sample: GBB1564-ICV1564  
 Lab FileID: BB053787.D

## Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\0324BPL\BB053787.D\dad1B.ch Vial: 49  
 Signal #2 : C:\HPCHEM\1\DATA\0324BPL\BB053787.D\dad1A.ch  
 Acq On : 24-Mar-2017, 15:29:05 Operator: evitam  
 Sample : icv1564-500 Inst : G1315B  
 Misc : op64214, gbb1564, 10.0,,, 50, 1, soil Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e

Method : D:\MSDCHEM\1\METHODS\8330B\_0324PLUS.M (Chemstation Integrator)  
 Title : Explosives by 8330A, 8330B, 8332  
 Last Update : Mon Mar 27 10:20:22 2017  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window
1	TNX	500.000	513.112	-2.6	103	0.00	1.16-	1.76
2	HMX	500.000	481.462	3.7	103	0.00	1.30-	1.90
3	DNX	500.000	483.804	3.2	101	0.00	1.57-	2.17
4	MNX	500.000	521.596	-4.3	102	0.00	2.20-	2.80
5	RDX	500.000	476.203	4.8	102	0.00	2.75-	3.55
6	1,3,5-Trinitrobenzene			NA				
7	1,3-Dinitrobenzene	500.000	454.918	9.0	95	0.00	5.82-	6.62
8	3,5-Dinitroaniline	500.000	531.440	-6.3	107	0.00	6.25-	7.05
9	Nitrobenzene	500.000	476.096	4.8	100	0.00	7.34-	8.14
10	Nitroglycerin			NA				
11	Tetryl	500.000	866.868	-73.4#	180	0.01	9.26-	10.06
12	2,4,6-Trinitrotoluene	500.000	744.635	-48.9#	151	0.00	9.70-	10.50
13	2-Amino-4,6-Dinitrotol	500.000	492.630	1.5	102	0.00	10.15-	10.95
14	4-Amino-2,6-Dinitrotol	500.000	519.654	-3.9	108	0.00	10.64-	11.44
15 S	3,4-Dinitrotoluene			NA				
16	2,4-Dinitrotoluene	500.000	473.812	5.2	100	0.00	11.58-	12.38
17	2,6-Dinitrotoluene	500.000	467.241	6.6	102	0.00	12.02-	12.82
18	o-Nitrotoluene	500.000	473.271	5.3	101	0.01	14.99-	15.87
19	p-Nitrotoluene	500.000	489.225	2.2	101	0.01	15.49-	16.49
20	m-Nitrotoluene	500.000	467.692	6.5	99	0.01	16.35-	17.35
21	PETN			NA				
*****	Signal #2	*****						
1	TNX	500.000	501.911	-0.4	102	0.00	1.16-	1.76
2	HMX	500.000	519.056	-3.8	104	0.00	1.30-	1.90
3	DNX	500.000	477.088	4.6	101	0.00	1.57-	2.17
4	MNX	500.000	508.157	-1.6	102	0.00	2.20-	2.80
5	RDX	500.000	479.305	4.1	100	0.00	2.75-	3.55
6	1,3,5-Trinitrobenzene			NA				
7	1,3-Dinitrobenzene	500.000	454.488	9.1	93	0.00	5.82-	6.62

# Initial Calibration Verification

Page 2 of 2

**Job Number:** FA42152  
**Account:** CAPEGAA Cape Environmental Management Inc.  
**Project:** OB/OD Site I, OB Site II, Fort Bliss, TX

**Sample:** GBB1564-ICV1564  
**Lab FileID:** BB053787.D

8	3,5-Dinitroaniline	500.000	527.274	-5.5	106	0.00	6.25- 7.05
----- Amount Calc. %Drift -----							
9	Nitrobenzene	500.000	489.161	2.2	101	0.00	7.34- 8.14
10	Nitroglycerin	2500.000	2614.825	-4.6	110	0.01	8.84- 9.84
11	Tetryl	500.000	963.498	-92.7#	197	0.00	9.26-10.06
12	2,4,6-Trinitrotoluene	500.000	635.178	-27.0#	126	0.00	9.71-10.51
13	2-Amino-4,6-Dinitrotol	500.000	495.552	0.9	98	0.00	10.15-10.95
14	4-Amino-2,6-Dinitrotol	500.000	565.896	-13.2	105	0.00	10.64-11.44
----- Amount Calc. %Drift -----							
15 S	3,4-Dinitrotoluene			-----NA-----			
----- Amount Calc. %Drift -----							
16	2,4-Dinitrotoluene	500.000	514.328	-2.9	101	0.00	11.58-12.38
17	2,6-Dinitrotoluene	500.000	512.716	-2.5	103	0.00	12.02-12.82
18	o-Nitrotoluene	500.000	475.339	4.9	100	0.01	14.87-15.87
19	p-Nitrotoluene	500.000	502.135	-0.4	99	0.02	15.49-16.49
20	m-Nitrotoluene	500.000	518.297	-3.7	99	0.01	16.36-17.36
21	PETN	2500.000	2954.885	-18.2#	117	0.00	18.31-19.51
-----							

(#) = Out of Range

BB053784.D 8330B\_0324PLUS.M

SPCC's out = 0 CCC's out = 0

Wed Mar 29 11:27:18 2017

8.82  
8

## Initial Calibration Verification

Page 1 of 2

Job Number: FA42152

Sample: GBB1564-ICV1564

Account: CAPEGAA Cape Environmental Management Inc.

Lab FileID: BB053788.D

Project: OB/OD Site I, OB Site II, Fort Bliss, TX

## Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\0324BPL\BB053788.D\dad1B.ch Vial: 50  
 Signal #2 : C:\HPCHEM\1\DATA\0324BPL\BB053788.D\dad1A.ch  
 Acq On : 24-Mar-2017, 15:59:05 Operator: evitam  
 Sample : icv1564-500,b Inst : G1315B  
 Misc : op64214,gbbl564,10.0,,,50,1,soil Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e

Method : D:\MSDCHEM\1\METHODS\8330B\_0324PLUS.M (Chemstation Integrator)  
 Title : Explosives by 8330A,8330B,8332  
 Last Update : Mon Mar 27 10:20:22 2017  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window
1	TNX			-----NA-----				
2	HMX			-----NA-----				
3	DNX			-----NA-----				
4	MNX			-----NA-----				
5	RDX			-----NA-----				
6	1,3,5-Trinitrobenzene	500.000	464.252	7.1	76	0.00	4.56-	5.36
7	1,3-Dinitrobenzene			-----NA-----				

	Amount	Calc.	%Drift
8	3,5-Dinitroaniline		-----NA-----

	Amount	Calc.	%Drift
9	Nitrobenzene		-----NA-----
10	Nitroglycerin		-----NA-----
11	Tetryl		-----NA-----
12	2,4,6-Trinitrotoluene		-----NA-----
13	2-Amino-4,6-Dinitrotoluen		-----NA-----
14	4-Amino-2,6-Dinitrotoluen		-----NA-----
15 S	3,4-Dinitrotoluene		-----NA-----
16	2,4-Dinitrotoluene		-----NA-----
17	2,6-Dinitrotoluene		-----NA-----
18	o-Nitrotoluene		-----NA-----
19	p-Nitrotoluene		-----NA-----
20	m-Nitrotoluene		-----NA-----
21	PETN		-----NA-----

\*\*\*\*\* Signal #2 \*\*\*\*\*

1	TNX			-----NA-----				
2	HMX			-----NA-----				
3	DNX			-----NA-----				
4	MNX			-----NA-----				
5	RDX			-----NA-----				
6	1,3,5-Trinitrobenzene	500.000	441.870	11.6	76	0.00	4.56-	5.36
7	1,3-Dinitrobenzene			-----NA-----				

# Initial Calibration Verification

Page 2 of 2

**Job Number:** FA42152  
**Account:** CAPEGAA Cape Environmental Management Inc.  
**Project:** OB/OD Site I, OB Site II, Fort Bliss, TX

**Sample:** GBB1564-ICV1564  
**Lab FileID:** BB053788.D

8	3,5-Dinitroaniline	-----NA-----		
	----- Amount	Calc.	%Drift	-----
9	Nitrobenzene	-----NA-----		
10	Nitroglycerin	-----NA-----		
11	Tetryl	-----NA-----		
12	2,4,6-Trinitrotoluene	-----NA-----		
13	2-Amino-4,6-Dinitrotoluen	-----NA-----		
14	4-Amino-2,6-Dinitrotoluen	-----NA-----		
	----- Amount	Calc.	%Drift	-----
15 S	3,4-Dinitrotoluene	-----NA-----		
	----- Amount	Calc.	%Drift	-----
16	2,4-Dinitrotoluene	-----NA-----		
17	2,6-Dinitrotoluene	-----NA-----		
18	o-Nitrotoluene	-----NA-----		
19	p-Nitrotoluene	-----NA-----		
20	m-Nitrotoluene	-----NA-----		
21	PETN	-----NA-----		

(#) = Out of Range  
 BB053784.D 8330B\_0324PLUS.M

SPCC's out = 0 CCC's out = 0  
 Wed Mar 29 11:27:19 2017

8.8.3

8

## Continuing Calibration Summary

Page 1 of 2

Job Number: FA42152  
 Account: CAPEGAA Cape Environmental Management Inc.  
 Project: OB/OD Site I, OB Site II, Fort Bliss, TX

Sample: GBB1567-CC1564  
 Lab FileID: BB053965.D

## Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\0329BPL\BB053965.D\dad1B.ch Vial: 2  
 Signal #2 : C:\HPCHEM\1\DATA\0329BPL\BB053965.D\dad1A.ch  
 Acq On : 30-Mar-2017, 20:27:38 Operator: evitam  
 Sample : cc1564-1000 Inst : G1315B  
 Misc : op64321, gbb1567, 10.0, , , 50, 1, water Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e

Method : D:\MSDCHEM\1\METHODS\8330B\_0324PLUS.M (Chemstation Integrator)  
 Title : Explosives by 8330A, 8330B, 8332  
 Last Update : Fri Mar 31 10:06:47 2017  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window
1	TNX	1000.000	1003.012	-0.3	97	0.00	1.14-	1.74
2	HMX	1000.000	910.544	8.9	97	0.00	1.27-	1.87
3	DNX	1000.000	988.559	1.1	102	0.00	1.54-	2.14
4	MNX	1000.000	1007.864	-0.8	99	0.00	2.15-	2.75
5	RDX	1000.000	944.308	5.6	100	0.00	2.69-	3.49
6	1,3,5-Trinitrobenzene	1000.000	963.864	3.6	98	0.01	4.46-	5.26
7	1,3-Dinitrobenzene	1000.000	962.893	3.7	99	0.01	5.71-	6.51

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window
8	3,5-Dinitroaniline	1000.000	982.309	1.8	99	0.00	6.13-	6.93

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window
9	Nitrobenzene	1000.000	949.692	5.0	97	0.01	7.25-	8.05
10	Nitroglycerin			NA				
11	Tetryl	1000.000	951.768	4.8	98	0.02	9.05-	9.85
12	2,4,6-Trinitrotoluene	1000.000	972.152	2.8	98	0.03	9.49-	10.29
13	2-Amino-4,6-Dinitrotol	1000.000	974.897	2.5	99	0.02	9.94-	10.74
14	4-Amino-2,6-Dinitrotol	1000.000	998.280	0.2	101	0.02	10.42-	11.22
15 S	3,4-Dinitrotoluene	1000.000	921.716	7.8	98	0.03	10.71-	11.51
16	2,4-Dinitrotoluene	1000.000	957.049	4.3	99	0.03	11.35-	12.15
17	2,6-Dinitrotoluene	1000.000	923.459	7.7	99	0.03	11.81-	12.61
18	o-Nitrotoluene	1000.000	929.700	7.0	97	0.03	14.84-	15.72
19	p-Nitrotoluene	1000.000	976.302	2.4	97	0.03	15.32-	16.32
20	m-Nitrotoluene	1000.000	939.085	6.1	97	0.02	16.22-	17.22
21	PETN			NA				

\*\*\*\*\* Signal #2 \*\*\*\*\*

1	TNX	1000.000	974.176	2.6	97	0.00	1.14-	1.74
2	HMX	1000.000	968.048	3.2	98	0.00	1.27-	1.87
3	DNX	1000.000	980.124	2.0	103	0.00	1.54-	2.14
4	MNX	1000.000	998.706	0.1	100	0.00	2.15-	2.75
5	RDX	1000.000	964.392	3.6	100	0.00	2.69-	3.49
6	1,3,5-Trinitrobenzene	1000.000	979.806	2.0	98	0.01	4.46-	5.26
7	1,3-Dinitrobenzene	1000.000	957.974	4.2	98	0.00	5.71-	6.51

----- Amount Calc. %Drift -----

# Continuing Calibration Summary

Page 2 of 2

**Job Number:** FA42152  
**Account:** CAPEGAA Cape Environmental Management Inc.  
**Project:** OB/OD Site I, OB Site II, Fort Bliss, TX

**Sample:** GBB1567-CC1564  
**Lab FileID:** BB053965.D

8	3,5-Dinitroaniline	1000.000	964.390	3.6	97	0.00	6.13- 6.93
----- Amount Calc. %Drift -----							
9	Nitrobenzene	1000.000	991.396	0.9	99	0.01	7.25- 8.05
10	Nitroglycerin	5000.000	4791.650	4.2	96	0.02	8.67- 9.67
11	Tetryl	1000.000	1089.015	-8.9	101	0.02	9.05- 9.85
12	2,4,6-Trinitrotoluene	1000.000	1003.955	-0.4	100	0.03	9.49-10.29
13	2-Amino-4,6-Dinitrotol	1000.000	1025.492	-2.5	100	0.02	9.94-10.74
14	4-Amino-2,6-Dinitrotol	1000.000	1144.457	-14.4	104	0.02	10.42-11.22
----- Amount Calc. %Drift -----							
15 S	3,4-Dinitrotoluene	1000.000	985.108	1.5	98	0.03	10.71-11.51
----- Amount Calc. %Drift -----							
16	2,4-Dinitrotoluene	1000.000	1027.852	-2.8	100	0.03	11.36-12.16
17	2,6-Dinitrotoluene	1000.000	1015.383	-1.5	100	0.03	11.81-12.61
18	o-Nitrotoluene	1000.000	963.972	3.6	98	0.03	14.72-15.72
19	p-Nitrotoluene	1000.000	1076.327	-7.6	101	0.03	15.32-16.32
20	m-Nitrotoluene	1000.000	1043.767	-4.4	96	0.02	16.22-17.22
21	PETN	5000.000	5133.299	-2.7	101	0.02	18.18-19.38

(#) = Out of Range

BB053785.D 8330B\_0324PLUS.M

SPCC's out = 0 CCC's out = 0

Fri Mar 31 10:17:08 2017

8.8.4  
8

## Continuing Calibration Summary

Page 1 of 2

Job Number: FA42152  
 Account: CAPEGAA Cape Environmental Management Inc.  
 Project: OB/OD Site I, OB Site II, Fort Bliss, TX

Sample: GBB1567-CC1564  
 Lab FileID: BB053977.D

## Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\0329BPL\BB053977.D\dad1B.ch Vial: 2  
 Signal #2 : C:\HPCHEM\1\DATA\0329BPL\BB053977.D\dad1A.ch  
 Acq On : 31-Mar-2017, 02:27:29 Operator: evitam  
 Sample : cc1564-1000 Inst : G1315B  
 Misc : op64396, gbb1567, 10.0, , , 10, 1, SOIL Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e

Method : D:\MSDCHEM\1\METHODS\8330B\_0324PLUS.M (Chemstation Integrator)  
 Title : Explosives by 8330A, 8330B, 8332  
 Last Update : Fri Mar 31 10:06:47 2017  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window
1	TNX	1000.000	993.991	0.6	97	0.00	1.14-	1.74
2	HMX	1000.000	877.878	12.2	94	0.00	1.27-	1.87
3	DNX	1000.000	992.256	0.8	103	0.00	1.54-	2.14
4	MNX	1000.000	1013.532	-1.4	99	0.00	2.15-	2.75
5	RDX	1000.000	927.027	7.3	98	0.00	2.69-	3.49
6	1,3,5-Trinitrobenzene	1000.000	963.838	3.6	98	0.00	4.46-	5.26
7	1,3-Dinitrobenzene	1000.000	964.208	3.6	100	0.00	5.71-	6.51
----- Amount Calc. %Drift -----								
8	3,5-Dinitroaniline	1000.000	968.735	3.1	98	0.00	6.13-	6.93
----- Amount Calc. %Drift -----								
9	Nitrobenzene	1000.000	937.055	6.3	96	0.00	7.25-	8.05
10	Nitroglycerin			NA				
11	Tetryl	1000.000	954.336	4.6	98	0.00	9.05-	9.85
12	2,4,6-Trinitrotoluene	1000.000	969.341	3.1	97	0.00	9.49-	10.29
13	2-Amino-4,6-Dinitrotol	1000.000	965.621	3.4	98	0.00	9.94-	10.74
14	4-Amino-2,6-Dinitrotol	1000.000	971.471	2.9	98	0.00	10.42-	11.22
15 S	3,4-Dinitrotoluene	1000.000	920.156	8.0	98	0.00	10.71-	11.51
16	2,4-Dinitrotoluene	1000.000	958.659	4.1	99	0.00	11.35-	12.15
17	2,6-Dinitrotoluene	1000.000	929.973	7.0	100	0.00	11.81-	12.61
18	o-Nitrotoluene	1000.000	919.877	8.0	96	0.00	14.84-	15.72
19	p-Nitrotoluene	1000.000	963.643	3.6	96	0.00	15.32-	16.32
20	m-Nitrotoluene	1000.000	927.266	7.3	95	0.00	16.22-	17.22
21	PETN			NA				
***** Signal #2 *****								
1	TNX	1000.000	965.676	3.4	96	0.00	1.14-	1.74
----- Amount Calc. %Drift -----								
2	HMX	1000.000	946.712	5.3	96	0.00	1.27-	1.87
----- Amount Calc. %Drift -----								
3	DNX	1000.000	962.351	3.8	101	0.00	1.54-	2.14
4	MNX	1000.000	985.355	1.5	98	0.00	2.15-	2.75
5	RDX	1000.000	952.823	4.7	99	0.00	2.69-	3.49
6	1,3,5-Trinitrobenzene	1000.000	969.826	3.0	97	0.00	4.46-	5.26
7	1,3-Dinitrobenzene	1000.000	978.424	2.2	100	0.00	5.71-	6.51
----- Amount Calc. %Drift -----								

# Continuing Calibration Summary

Page 2 of 2

**Job Number:** FA42152  
**Account:** CAPEGAA Cape Environmental Management Inc.  
**Project:** OB/OD Site I, OB Site II, Fort Bliss, TX

**Sample:** GBB1567-CC1564  
**Lab FileID:** BB053977.D

8	3,5-Dinitroaniline	1000.000	943.879	5.6	95	0.00	6.13- 6.93
----- Amount Calc. %Drift -----							
9	Nitrobenzene	1000.000	969.395	3.1	97	0.00	7.25- 8.05
10	Nitroglycerin	5000.000	4911.727	1.8	98	0.00	8.67- 9.67
11	Tetryl	1000.000	1035.756	-3.6	96	0.00	9.05- 9.85
12	2,4,6-Trinitrotoluene	1000.000	964.871	3.5	96	0.00	9.49-10.29
13	2-Amino-4,6-Dinitrotol	1000.000	997.961	0.2	97	0.00	9.94-10.74
14	4-Amino-2,6-Dinitrotol	1000.000	1084.350	-8.4	98	0.00	10.42-11.22
----- Amount Calc. %Drift -----							
15 S	3,4-Dinitrotoluene	1000.000	981.664	1.8	98	0.00	10.71-11.51
----- Amount Calc. %Drift -----							
16	2,4-Dinitrotoluene	1000.000	1028.045	-2.8	100	0.00	11.36-12.16
17	2,6-Dinitrotoluene	1000.000	1019.977	-2.0	100	0.00	11.81-12.61
18	o-Nitrotoluene	1000.000	924.495	7.6	94	0.00	14.72-15.72
19	p-Nitrotoluene	1000.000	1062.072	-6.2	99	0.00	15.32-16.32
20	m-Nitrotoluene	1000.000	1024.971	-2.5	94	0.00	16.22-17.22
21	PETN	5000.000	5201.749	-4.0	102	0.00	18.18-19.38

(#) = Out of Range

BB053785.D 8330B\_0324PLUS.M

SPCC's out = 0 CCC's out = 0

Fri Mar 31 10:17:09 2017



## Continuing Calibration Summary

Page 1 of 2

Job Number: FA42152  
 Account: CAPEGAA Cape Environmental Management Inc.  
 Project: OB/OD Site I, OB Site II, Fort Bliss, TX

Sample: GBB1567-ECC1564  
 Lab FileID: BB053989.D

## Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\0329BPL\BB053989.D\dad1B.ch Vial: 2  
 Signal #2 : C:\HPCHEM\1\DATA\0329BPL\BB053989.D\dad1A.ch  
 Acq On : 31-Mar-2017, 09:03:03 Operator: evitam  
 Sample : ecc1564-1000 Inst : G1315B  
 Misc : op64396, gbb1567, 10.0, , , 10, 1, SOIL Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e

Method : D:\MSDCHEM\1\METHODS\8330B\_0324PLUS.M (Chemstation Integrator)  
 Title : Explosives by 8330A, 8330B, 8332  
 Last Update : Fri Mar 31 10:06:47 2017  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev (min)	RT	Window
1	TNX	1000.000	1002.987	-0.3	97	0.00	1.14-	1.74
2	HMX	1000.000	877.928	12.2	94	0.00	1.27-	1.87
3	DNX	1000.000	994.906	0.5	103	0.00	1.54-	2.14
4	MNX	1000.000	1004.887	-0.5	99	0.00	2.15-	2.75
5	RDX	1000.000	928.614	7.1	98	0.00	2.69-	3.49
6	1,3,5-Trinitrobenzene	1000.000	960.545	3.9	98	0.00	4.46-	5.26
7	1,3-Dinitrobenzene	1000.000	965.956	3.4	100	0.00	5.71-	6.51
-----								
8	3,5-Dinitroaniline	1000.000	973.232	2.7	98	0.00	6.13-	6.93
-----								
9	Nitrobenzene	1000.000	934.666	6.5	96	0.00	7.25-	8.05
10	Nitroglycerin			NA				
11	Tetryl	1000.000	966.294	3.4	99	0.00	9.05-	9.85
12	2,4,6-Trinitrotoluene	1000.000	975.313	2.5	98	0.00	9.49-	10.29
13	2-Amino-4,6-Dinitrotol	1000.000	975.108	2.5	99	0.00	9.94-	10.74
14	4-Amino-2,6-Dinitrotol	1000.000	975.888	2.4	99	0.00	10.42-	11.22
15 S	3,4-Dinitrotoluene	1000.000	933.711	6.6	99	0.00	10.71-	11.51
16	2,4-Dinitrotoluene	1000.000	965.904	3.4	100	0.00	11.35-	12.15
17	2,6-Dinitrotoluene	1000.000	931.421	6.9	100	0.00	11.81-	12.61
18	o-Nitrotoluene	1000.000	907.490	9.3	95	0.00	14.84-	15.72
19	p-Nitrotoluene	1000.000	955.875	4.4	95	0.00	15.32-	16.32
20	m-Nitrotoluene	1000.000	911.799	8.8	94	0.00	16.22-	17.22
21	PETN			NA				
***** Signal #2 *****								
1	TNX	1000.000	968.427	3.2	96	0.00	1.14-	1.74
-----								
2	HMX	1000.000	936.618	6.3	95	0.00	1.27-	1.87
-----								
3	DNX	1000.000	963.441	3.7	102	0.00	1.54-	2.14
4	MNX	1000.000	981.248	1.9	98	0.00	2.15-	2.75
5	RDX	1000.000	955.293	4.5	99	0.00	2.69-	3.49
6	1,3,5-Trinitrobenzene	1000.000	977.754	2.2	98	0.00	4.46-	5.26
7	1,3-Dinitrobenzene	1000.000	993.661	0.6	101	0.00	5.71-	6.51
-----								
		Amount	Calc.	%Drift				

# Continuing Calibration Summary

Page 2 of 2

**Job Number:** FA42152  
**Account:** CAPEGAA Cape Environmental Management Inc.  
**Project:** OB/OD Site I, OB Site II, Fort Bliss, TX

**Sample:** GBB1567-ECC1564  
**Lab FileID:** BB053989.D

8	3,5-Dinitroaniline	1000.000	959.881	4.0	97	0.00	6.13- 6.93
----- Amount Calc. %Drift -----							
9	Nitrobenzene	1000.000	966.367	3.4	97	0.00	7.25- 8.05
10	Nitroglycerin	5000.000	4935.032	1.3	98	0.00	8.67- 9.67
11	Tetryl	1000.000	1029.484	-2.9	95	0.00	9.05- 9.85
12	2,4,6-Trinitrotoluene	1000.000	966.130	3.4	96	0.00	9.49-10.29
13	2-Amino-4,6-Dinitrotol	1000.000	1001.345	-0.1	98	0.00	9.94-10.74
14	4-Amino-2,6-Dinitrotol	1000.000	1086.055	-8.6	98	0.00	10.42-11.22
----- Amount Calc. %Drift -----							
15 S	3,4-Dinitrotoluene	1000.000	987.322	1.3	99	0.00	10.71-11.51
----- Amount Calc. %Drift -----							
16	2,4-Dinitrotoluene	1000.000	1036.117	-3.6	101	0.00	11.36-12.16
17	2,6-Dinitrotoluene	1000.000	1017.587	-1.8	100	0.00	11.81-12.61
18	o-Nitrotoluene	1000.000	937.457	6.3	95	0.00	14.72-15.72
19	p-Nitrotoluene	1000.000	1054.413	-5.4	98	0.00	15.32-16.32
20	m-Nitrotoluene	1000.000	995.168	0.5	92	0.00	16.22-17.22
21	PETN	5000.000	5135.074	-2.7	101	0.00	18.18-19.38

(#) = Out of Range

BB053785.D 8330B\_0324PLUS.M

SPCC's out = 0 CCC's out = 0

Fri Mar 31 10:17:10 2017

8.8  
9.8  
8

## Initial Calibration Summary

Page 1 of 2

Job Number: FA42152

Sample: GBB1568-ICC1568

Account: CAPEGAA Cape Environmental Management Inc.

Lab FileID: BB053995.D

Project: OB/OD Site I, OB Site II, Fort Bliss, TX

## Response Factor Report G1315B

Method : D:\MSDCHEM\1\METHODS\8330B\_0331PLUS.M (Chemstation Integrator)  
 Title : Explosives by 8330A,8330B,8332  
 Last Update : Fri Mar 31 15:52:11 2017  
 Response via : Initial Calibration

## Calibration Files

20 =BB053991.D 50 =BB053992.D 100 =BB053993.D 200 =BB053994.D  
 500 =BB053995.D 1000=BB053996.D 2000=BB053997.D

Compound	20	50	100	200	500	1000	2000	Avg	%RSD
1) TNX	2.870	3.679	3.264	3.340	3.276	3.272		3.283 E3	7.83
2) HMX	2.404	2.907	1.938	1.871	1.678	1.651		2.075 E3	23.59
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9986									
Response Ratio = 0.00000 + 1820.25504 *A + -0.17517 *A^2									
3) DNX	2.351	3.517	2.914	2.967	2.844	2.835		2.905 E3	12.82
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9998									
Response Ratio = 0.00000 + 2913.06643 *A + -0.08075 *A^2									
4) MNX	1.873	2.565	2.428	2.413	2.304	2.316		2.317 E3	10.23
5) RDX	2.254	2.727	2.102	2.045	1.942	1.845		2.153 E3	14.60
6) 1,3,5-Trinitroben	4.753	5.360	4.242	4.175	4.011	3.957		4.416 E3	12.27
7) 1,3-Dinitrobenzen	5.997	6.337	5.611	5.589	5.421	5.346		5.717 E3	6.62
8) 3,5-Dinitroanilin	5.483	5.327	4.853	4.761	4.421	4.332		4.863 E3	9.59
9) Nitrobenzene	3.697	3.705	3.293	3.297	2.418	3.094		3.251 E3	14.61
10) Nitroglycerin								0.000	-1.00
11) Tetryl	2.901	4.002	3.273	3.199	2.947	2.908		3.205 E3	13.15
12) 2,4,6-Trinitrotol	4.229	4.761	4.279	4.013	3.810	3.750		4.140 E3	8.97
13) 2-Amino-4,6-Dinit	4.755	4.556	3.755	3.638	3.352	3.317		3.895 E3	15.79
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9996									
Response Ratio = 0.00000 + 3546.41652 *A + -0.23753 *A^2									
14) 4-Amino-2,6-Dinit	3.021	3.114	2.723	2.541	2.398	2.368		2.694 E3	11.75
15)S 3,4-Dinitrotoluen	3.541	3.356	2.818	2.540	2.325	2.259		2.807 E3	19.15
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9994									
Response Ratio = 0.00000 + 2520.21607 *A + -0.26779 *A^2									
16) 2,4-Dinitrotoluen	5.142	6.280	5.368	5.127	4.866	4.850		5.272 E3	10.06
17) 2,6-Dinitrotoluen	2.702	3.823	3.074	2.960	2.821	2.781		3.027 E3	13.62
18) o-Nitrotoluene	2.402	2.683	2.300	2.329	1.846	2.172		2.289 E3	12.03
19) p-Nitrotoluene	3.293	3.774	3.453	3.522	2.737	3.376		3.359 E3	10.31
20) m-Nitrotoluene	4.087	3.836	3.550	3.479	2.505	3.269		3.454 E3	15.81
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9919									
Response Ratio = 0.00000 + 2437.29083 *A + 0.79856 *A^2									
21) PETN								0.000	-1.00

## Signal #2

1) TNX	4.455	5.843	5.171	5.284	5.055	5.043		5.142 E3	8.71
2) HMX	8.023	8.827	5.747	5.544	4.674	4.566		6.230 E3	28.58
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9976									
Response Ratio = 0.00000 + 5259.04707 *A + -0.71652 *A^2									
3) DNX	5.473	6.474	5.015	5.066	4.590	4.544		5.194 E3	13.76
4) MNX	3.209	4.084	3.661	3.725	3.598	3.568		3.641 E3	7.74
5) RDX	3.951	3.929	3.284	3.228	3.027	2.958		3.396 E3	12.91

# Initial Calibration Summary

Page 2 of 2

**Job Number:** FA42152  
**Account:** CAPEGAA Cape Environmental Management Inc.  
**Project:** OB/OD Site I, OB Site II, Fort Bliss, TX

**Sample:** GBB1568-ICC1568  
**Lab FileID:** BB053995.D

6)	1,3,5-Trinitroben	0.977	1.011	0.828	0.830	0.781	0.777	0.867	E4	11.67
7)	1,3-Dinitrobenzen	3.549	4.549	3.924	3.896	3.730	3.715	3.894	E3	8.96
8)	3,5-Dinitroanilin	8.513	8.835	8.010	8.040	7.345	7.336	8.013	E3	7.55
9)	Nitrobenzene	3.150	3.474	3.245	3.187	2.273	2.966	3.049	E3	13.58
10)	Nitroglycerin	1.159	1.355	1.211	1.222	1.203	1.204	1.226	E3	5.46
11)	Tetryl	5.974	5.549	4.934	5.021	4.841	4.827	5.191	E3	9.00
12)	2,4,6-Trinitrotol	4.923	5.559	4.614	4.603	4.568	4.553	4.803	E3	8.22
13)	2-Amino-4,6-Dinit	7.166	5.951	4.863	5.163	4.955	4.950	5.508	E3	16.44
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9998										
Response Ratio = 0.00000 + 5053.88441 *A + -0.10887 *A^2										
14)	4-Amino-2,6-Dinit	5.535	5.518	4.672	5.087	4.768	4.781	5.060	E3	7.65
15)S	3,4-Dinitrotoluen	3.941	4.468	3.988	4.123	3.972	3.957	4.075	E3	4.99
16)	2,4-Dinitrotoluen	2.863	3.743	3.377	3.257	3.191	3.169	3.266	E3	8.85
17)	2,6-Dinitrotoluen	3.785	4.216	3.813	3.690	3.581	3.573	3.776	E3	6.29
18)	o-Nitrotoluene	4.473	3.609	3.198	3.016	2.156	2.952	3.234	E3	23.83
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9909										
Response Ratio = 0.00000 + 2032.77145 *A + 0.88646 *A^2										
19)	p-Nitrotoluene	1.854	2.587	2.672	2.647	2.138	2.759	2.443	E3	14.81
20)	m-Nitrotoluene	4.118	3.724	3.537	3.912	2.961	3.869	3.687	E3	10.99
21)	PETN	1.259	1.505	1.313	1.421	1.300	1.319	1.353	E3	6.78

(#) = Out of Range

8330B\_0331PLUS.M

Mon Apr 03 07:12:44 2017

8.8.7  
8

## Initial Calibration Verification

Page 1 of 2

Job Number: FA42152

Sample: GBB1568-ICV1568

Account: CAPEGAA Cape Environmental Management Inc.

Lab FileID: BB053998.D

Project: OB/OD Site I, OB Site II, Fort Bliss, TX

## Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\0331BPL\BB053998.D\dad1B.ch Vial: 38  
 Signal #2 : C:\HPCHEM\1\DATA\0331BPL\BB053998.D\dad1A.ch  
 Acq On : 31-Mar-2017, 14:22:19 Operator: evitam  
 Sample : ICV1568-500 Inst : G1315B  
 Misc : op64321,gbbl568,10.0,,,50,1,water Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e

Method : D:\MSDCHEM\1\METHODS\8330B\_0331PLUS.M (Chemstation Integrator)  
 Title : Explosives by 8330A,8330B,8332  
 Last Update : Fri Mar 31 15:52:11 2017  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window
1	TNX	500.000	500.879	-0.2	100	0.00	1.14	1.74
		----- Amount	Calc.	%Drift	-----			
2	HMX	500.000	520.881	-4.2	107	0.00	1.27	1.87
3	DNX	500.000	496.332	0.7	100	0.00	1.54	2.14
		----- Amount	Calc.	%Drift	-----			
4	MNX	500.000	502.461	-0.5	101	0.00	2.15	2.75
5	RDX	500.000	432.540	13.5	96	0.00	2.69	3.49
6	1,3,5-Trinitrobenzene	500.000	452.180	9.6	100	0.00	4.46	5.26
7	1,3-Dinitrobenzene	500.000	425.847	14.8	90	0.00	5.71	6.51
8	3,5-Dinitroaniline	500.000	437.349	12.5	96	0.00	6.13	6.93
9	Nitrobenzene	500.000	477.350	4.5	128	0.00	7.25	8.05
10	Nitroglycerin	-----NA-----						
11	Tetryl	500.000	431.831	13.6	94	0.01	9.05	9.85
12	2,4,6-Trinitrotoluene	500.000	377.070	24.6#	82	0.00	9.49	10.29
		----- Amount	Calc.	%Drift	-----			
13	2-Amino-4,6-Dinitrotol	500.000	489.433	2.1	100	0.00	9.94	10.74
		----- Amount	Calc.	%Drift	-----			
14	4-Amino-2,6-Dinitrotol	500.000	480.327	3.9	108	0.00	10.42	11.22
		----- Amount	Calc.	%Drift	-----			
15 S	3,4-Dinitrotoluene	-----NA-----						
		----- Amount	Calc.	%Drift	-----			
16	2,4-Dinitrotoluene	500.000	439.869	12.0	95	0.00	11.35	12.15
17	2,6-Dinitrotoluene	500.000	451.778	9.6	97	0.00	11.81	12.61
18	o-Nitrotoluene	500.000	489.468	2.1	121	0.00	14.84	15.72
19	p-Nitrotoluene	500.000	495.686	0.9	122	0.00	15.32	16.32
		----- Amount	Calc.	%Drift	-----			
20	m-Nitrotoluene	500.000	566.949	-13.4	131	0.00	16.22	17.22
		----- Amount	Calc.	%Drift	-----			
21	PETN	-----NA-----						
*****	Signal #2	*****						
1	TNX	500.000	493.502	1.3	100	0.00	1.14	1.74

## Initial Calibration Verification

Page 2 of 2

Job Number: FA42152  
Account: CAPEGAA Cape Environmental Management Inc.  
Project: OB/OD Site I, OB Site II, Fort Bliss, TX

Sample: GBB1568-ICV1568  
Lab FileID: BB053998.D

		Amount	Calc.	%Drift			
2	HMX	500.000	515.772	-3.2	108	0.00	1.27- 1.87
3	DNX	500.000	444.947	11.0	101	0.00	1.54- 2.14
4	MNX	500.000	499.123	0.2	101	0.00	2.15- 2.75
5	RDX	500.000	442.504	11.5	99	0.00	2.69- 3.49
6	1,3,5-Trinitrobenzene	500.000	443.444	11.3	98	0.00	4.46- 5.26
7	1,3-Dinitrobenzene	500.000	435.557	12.9	91	0.00	5.71- 6.51
8	3,5-Dinitroaniline	500.000	446.650	10.7	97	0.00	6.13- 6.93
9	Nitrobenzene	500.000	496.419	0.7	133	0.00	7.25- 8.05
10	Nitroglycerin	2500.000	2644.337	-5.8	108	0.02	8.67- 9.67
11	Tetryl	500.000	436.446	12.7	94	0.00	9.05- 9.85
12	2,4,6-Trinitrotoluene	500.000	406.244	18.8#	85	0.00	9.49-10.29
13	2-Amino-4,6-Dinitrotol	500.000	511.725	-2.3	103	0.00	9.94-10.74
14	4-Amino-2,6-Dinitrotol	500.000	501.799	-0.4	107	0.00	10.42-11.22
15 S	3,4-Dinitrotoluene			-----NA-----			
16	2,4-Dinitrotoluene	500.000	467.234	6.6	96	0.01	11.36-12.15
17	2,6-Dinitrotoluene	500.000	466.538	6.7	98	0.01	11.81-12.61
18	o-Nitrotoluene	500.000	579.632	-15.9#	137	0.00	14.72-15.72
19	p-Nitrotoluene	500.000	541.212	-8.2	124	0.00	15.32-16.32
20	m-Nitrotoluene	500.000	506.586	-1.3	126	0.00	16.22-17.22
21	PETN	2500.000	2719.699	-8.8	113	0.00	18.18-19.38

(# ) = Out of Range

SPCC's out = 0 CCC's out = 0

BB053995.D 8330B\_0331PLUS.M

Mon Apr 03 07:12:31 2017

## Initial Calibration Verification

Page 1 of 2

Job Number: FA42152

Sample: GBB1568-ICV1568

Account: CAPEGAA Cape Environmental Management Inc.

Lab FileID: BB053999.D

Project: OB/OD Site I, OB Site II, Fort Bliss, TX

## Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\0331BPL\BB053999.D\dad1B.ch Vial: 39  
 Signal #2 : C:\HPCHEM\1\DATA\0331BPL\BB053999.D\dad1A.ch  
 Acq On : 31-Mar-2017, 14:52:20 Operator: evitam  
 Sample : ICV1568-500,B Inst : G1315B  
 Misc : op64321,gbbl568,10.0,,,50,1,water Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e

Method : D:\MSDCHEM\1\METHODS\8330B\_0331PLUS.M (Chemstation Integrator)  
 Title : Explosives by 8330A,8330B,8332  
 Last Update : Fri Mar 31 15:52:11 2017  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window
1	TNX			-----NA-----				
	-----	Amount	Calc.	%Drift	-----			
2	HMX			-----NA-----				
3	DNX			-----NA-----				
	-----	Amount	Calc.	%Drift	-----			
4	MNX			-----NA-----				
5	RDX			-----NA-----				
6	1,3,5-Trinitrobenzene			-----NA-----				
7	1,3-Dinitrobenzene			-----NA-----				
8	3,5-Dinitroaniline			-----NA-----				
9	Nitrobenzene			-----NA-----				
10	Nitroglycerin			-----NA-----				
11	Tetryl			-----NA-----				
12	2,4,6-Trinitrotoluene	500.000	415.731	16.9#	90	0.00	9.49-10.29	
	-----	Amount	Calc.	%Drift	-----			
13	2-Amino-4,6-Dinitrotoluen			-----NA-----				
	-----	Amount	Calc.	%Drift	-----			
14	4-Amino-2,6-Dinitrotoluen			-----NA-----				
	-----	Amount	Calc.	%Drift	-----			
15 S	3,4-Dinitrotoluene			-----NA-----				
	-----	Amount	Calc.	%Drift	-----			
16	2,4-Dinitrotoluene			-----NA-----				
17	2,6-Dinitrotoluene			-----NA-----				
18	o-Nitrotoluene			-----NA-----				
19	p-Nitrotoluene			-----NA-----				
	-----	Amount	Calc.	%Drift	-----			
20	m-Nitrotoluene			-----NA-----				
	-----	Amount	Calc.	%Drift	-----			
21	PETN	2500.000	0.000	100.0#	0	-0.07	18.68-18.88	
*****	Signal #2	*****						
1	TNX			-----NA-----				

## Initial Calibration Verification

Page 2 of 2

**Job Number:** FA42152  
**Account:** CAPEGAA Cape Environmental Management Inc.  
**Project:** OB/OD Site I, OB Site II, Fort Bliss, TX

**Sample:** GBB1568-ICV1568  
**Lab FileID:** BB053999.D

		Amount	Calc.	%Drift	
2	HMX			NA	
		Amount	Calc.	%Drift	
3	DNX			NA	
4	MNX			NA	
5	RDX			NA	
6	1,3,5-Trinitrobenzene			NA	
7	1,3-Dinitrobenzene			NA	
8	3,5-Dinitroaniline			NA	
9	Nitrobenzene			NA	
10	Nitroglycerin			NA	
11	Tetryl			NA	
12	2,4,6-Trinitrotoluene	500.000	479.242	4.2	101 0.00 9.49-10.29
		Amount	Calc.	%Drift	
13	2-Amino-4,6-Dinitrotoluen			NA	
		Amount	Calc.	%Drift	
14	4-Amino-2,6-Dinitrotoluen			NA	
15 S	3,4-Dinitrotoluene			NA	
16	2,4-Dinitrotoluene			NA	
17	2,6-Dinitrotoluene			NA	
		Amount	Calc.	%Drift	
18	o-Nitrotoluene			NA	
		Amount	Calc.	%Drift	
19	p-Nitrotoluene			NA	
20	m-Nitrotoluene			NA	
21	PETN			NA	

(#) = Out of Range  
BB053995.D 8330B\_0331PLUS.M

SPCC's out = 0 CCC's out = 0  
Mon Apr 03 08:51:19 2017

8.8

8



## Continuing Calibration Summary

Page 1 of 2

Job Number: FA42152  
 Account: CAPEGAA Cape Environmental Management Inc.  
 Project: OB/OD Site I, OB Site II, Fort Bliss, TX

Sample: GBB1569-CC1568  
 Lab FileID: BB054003.D

## Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\0403BPL\BB054003.D\dad1B.ch Vial: 2  
 Signal #2 : C:\HPCHEM\1\DATA\0403BPL\BB054003.D\dad1A.ch  
 Acq On : 03-Apr-2017, 08:40:52 Operator: evitam  
 Sample : cc1568-1000,b Inst : G1315B  
 Misc : op64321,gbbl569,10.0,,,50,1,water Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e

Method : D:\MSDCHEM\1\METHODS\8330B\_0331PLUS.M (Chemstation Integrator)  
 Title : Explosives by 8330A,8330B,8332  
 Last Update : Fri Mar 31 15:52:11 2017  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev (min)	RT	Window
1	TNX	1000.000	1000.882	-0.1	100	0.00	1.14	1.74
----- Amount Calc. %Drift -----								
2	HMX	1000.000	997.044	0.3	99	0.00	1.27	1.87
3	DNX	1000.000	1014.472	-1.4	101	0.00	1.54	2.14
----- Amount Calc. %Drift -----								
4	MNX	1000.000	1015.454	-1.5	102	0.00	2.15	2.75
5	RDX	1000.000	871.287	12.9	102	0.00	2.69	3.49
6	1,3,5-Trinitrobenzene	1000.000	913.283	8.7	102	-0.01	4.46	5.26
7	1,3-Dinitrobenzene	1000.000	939.300	6.1	100	-0.01	5.71	6.51
8	3,5-Dinitroaniline	1000.000	915.974	8.4	103	-0.02	6.13	6.93
9	Nitrobenzene	1000.000	994.079	0.6	104	-0.02	7.25	8.05
10	Nitroglycerin	-----NA-----						
11	Tetryl	1000.000	957.066	4.3	105	-0.03	9.05	9.85
12	2,4,6-Trinitrotoluene	1000.000	917.642	8.2	101	-0.03	9.49	10.29
----- Amount Calc. %Drift -----								
13	2-Amino-4,6-Dinitrotol	1000.000	1023.929	-2.4	102	-0.03	9.94	10.74
----- Amount Calc. %Drift -----								
14	4-Amino-2,6-Dinitrotol	1000.000	896.280	10.4	102	-0.03	10.42	11.22
----- Amount Calc. %Drift -----								
15 S	3,4-Dinitrotoluene	1000.000	1000.014	-0.0	100	-0.03	10.71	11.51
----- Amount Calc. %Drift -----								
16	2,4-Dinitrotoluene	1000.000	917.080	8.3	100	-0.03	11.35	12.15
17	2,6-Dinitrotoluene	1000.000	911.026	8.9	99	-0.03	11.81	12.61
18	o-Nitrotoluene	1000.000	983.177	1.7	104	-0.03	14.84	15.72
19	p-Nitrotoluene	1000.000	1034.239	-3.4	103	-0.04	15.32	16.32
----- Amount Calc. %Drift -----								
20	m-Nitrotoluene	1000.000	1039.364	-3.9	104	-0.03	16.22	17.22
----- Amount Calc. %Drift -----								
21	PETN	-----NA-----						
*****	Signal #2	*****						
1	TNX	1000.000	991.786	0.8	101	0.00	1.14	1.74

# Continuing Calibration Summary

Page 2 of 2

**Job Number:** FA42152  
**Account:** CAPEGAA Cape Environmental Management Inc.  
**Project:** OB/OD Site I, OB Site II, Fort Bliss, TX

**Sample:** GBB1569-CC1568  
**Lab FileID:** BB054003.D

		Amount	Calc.	%Drift			
2	HMX	1000.000	994.774	0.5	99	0.00	1.27- 1.87
		Amount	Calc.	%Drift			
3	DNX	1000.000	878.086	12.2	100	0.00	1.54- 2.14
4	MNX	1000.000	1007.448	-0.7	103	0.00	2.15- 2.75
5	RDX	1000.000	883.329	11.7	101	0.00	2.69- 3.49
6	1,3,5-Trinitrobenzene	1000.000	911.729	8.8	102	-0.01	4.46- 5.26
7	1,3-Dinitrobenzene	1000.000	952.561	4.7	100	-0.02	5.71- 6.51
8	3,5-Dinitroaniline	1000.000	938.485	6.2	103	-0.02	6.13- 6.93
9	Nitrobenzene	1000.000	1021.512	-2.2	105	-0.02	7.25- 8.05
10	Nitroglycerin	5000.000	4736.918	5.3	96	-0.02	8.67- 9.67
11	Tetryl	1000.000	957.598	4.2	103	-0.03	9.05- 9.85
12	2,4,6-Trinitrotoluene	1000.000	952.733	4.7	101	-0.04	9.49-10.29
		Amount	Calc.	%Drift			
13	2-Amino-4,6-Dinitrotol	1000.000	1042.603	-4.3	104	-0.03	9.94-10.74
		Amount	Calc.	%Drift			
14	4-Amino-2,6-Dinitrotol	1000.000	984.624	1.5	104	-0.03	10.42-11.22
15 S	3,4-Dinitrotoluene	1000.000	983.129	1.7	101	-0.03	10.71-11.51
16	2,4-Dinitrotoluene	1000.000	976.626	2.3	101	-0.04	11.36-12.15
17	2,6-Dinitrotoluene	1000.000	945.801	5.4	100	-0.03	11.81-12.61
		Amount	Calc.	%Drift			
18	o-Nitrotoluene	1000.000	1048.175	-4.8	105	-0.03	14.72-15.72
		Amount	Calc.	%Drift			
19	p-Nitrotoluene	1000.000	1184.965	-18.5#	105	-0.03	15.32-16.32
20	m-Nitrotoluene	1000.000	1079.467	-7.9	103	-0.04	16.22-17.22
21	PETN	5000.000	5107.875	-2.2	105	-0.04	18.18-19.38

(#) = Out of Range

BB053996.D 8330B\_0331PLUS.M

SPCC's out = 0 CCC's out = 0

Mon Apr 03 13:03:50 2017

88.10

8

## Continuing Calibration Summary

Page 1 of 2

Job Number: FA42152  
 Account: CAPEGAA Cape Environmental Management Inc.  
 Project: OB/OD Site I, OB Site II, Fort Bliss, TX

Sample: GBB1569-CC1568  
 Lab FileID: BB054009.D

## Evaluate Continuing Calibration Report

Signal #1 : C:\HPCHEM\1\DATA\0403BPL\BB054009.D\dad1B.ch Vial: 2  
 Signal #2 : C:\HPCHEM\1\DATA\0403BPL\BB054009.D\dad1A.ch  
 Acq On : 03-Apr-2017, 11:52:12 Operator: evitam  
 Sample : CC1568-1000 Inst : G1315B  
 Misc : op64396, gbb1569, 10.0, , , 50, 1, SOIL Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e

Method : D:\MSDCHEM\1\METHODS\8330B\_0331PLUS.M (Chemstation Integrator)  
 Title : Explosives by 8330A, 8330B, 8332  
 Last Update : Fri Mar 31 15:52:11 2017  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window
1	TNX	1000.000	1002.550	-0.3	101	0.00	1.14	1.74
	----- Amount	Calc.	%Drift	-----				
2	HMX	1000.000	994.775	0.5	99	0.00	1.27	1.87
3	DNX	1000.000	1016.573	-1.7	102	0.00	1.54	2.14
	----- Amount	Calc.	%Drift	-----				
4	MNX	1000.000	1007.893	-0.8	101	0.00	2.15	2.75
5	RDX	1000.000	865.834	13.4	101	0.00	2.69	3.49
6	1,3,5-Trinitrobenzene	1000.000	909.029	9.1	101	0.00	4.46	5.26
7	1,3-Dinitrobenzene	1000.000	934.183	6.6	100	0.00	5.71	6.51
8	3,5-Dinitroaniline	1000.000	914.658	8.5	103	0.00	6.13	6.93
9	Nitrobenzene	1000.000	986.309	1.4	104	0.01	7.25	8.05
10	Nitroglycerin			-----NA-----				
11	Tetryl	1000.000	934.086	6.6	103	0.00	9.05	9.85
12	2,4,6-Trinitrotoluene	1000.000	908.081	9.2	100	0.00	9.49	10.29
	----- Amount	Calc.	%Drift	-----				
13	2-Amino-4,6-Dinitrotol	1000.000	1016.421	-1.6	101	0.00	9.94	10.74
	----- Amount	Calc.	%Drift	-----				
14	4-Amino-2,6-Dinitrotol	1000.000	894.183	10.6	102	0.01	10.42	11.22
	----- Amount	Calc.	%Drift	-----				
15 S	3,4-Dinitrotoluene	1000.000	980.451	2.0	98	0.03	10.71	11.51
	----- Amount	Calc.	%Drift	-----				
16	2,4-Dinitrotoluene	1000.000	911.364	8.9	99	0.02	11.35	12.15
17	2,6-Dinitrotoluene	1000.000	906.748	9.3	99	0.02	11.81	12.61
18	o-Nitrotoluene	1000.000	988.841	1.1	104	0.03	14.84	15.72
19	p-Nitrotoluene	1000.000	1028.184	-2.8	102	0.02	15.32	16.32
	----- Amount	Calc.	%Drift	-----				
20	m-Nitrotoluene	1000.000	1040.650	-4.1	104	0.02	16.22	17.22
	----- Amount	Calc.	%Drift	-----				
21	PETN			-----NA-----				
*****	Signal #2	*****						
1	TNX	1000.000	992.434	0.8	101	0.00	1.14	1.74

# Continuing Calibration Summary

Page 2 of 2

**Job Number:** FA42152  
**Account:** CAPEGAA Cape Environmental Management Inc.  
**Project:** OB/OD Site I, OB Site II, Fort Bliss, TX

**Sample:** GBB1569-CC1568  
**Lab FileID:** BB054009.D

		Amount	Calc.	%Drift			
2	HMX	1000.000	991.962	0.8	99	0.00	1.27- 1.87
3	DNX	1000.000	879.879	12.0	101	0.00	1.54- 2.14
4	MNX	1000.000	1011.270	-1.1	103	0.00	2.15- 2.75
5	RDX	1000.000	887.648	11.2	102	0.00	2.69- 3.49
6	1,3,5-Trinitrobenzene	1000.000	908.362	9.2	101	0.00	4.46- 5.26
7	1,3-Dinitrobenzene	1000.000	956.541	4.3	100	0.00	5.71- 6.51
8	3,5-Dinitroaniline	1000.000	937.341	6.3	102	0.00	6.13- 6.93
9	Nitrobenzene	1000.000	1000.957	-0.1	103	0.01	7.25- 8.05
10	Nitroglycerin	5000.000	4891.335	2.2	100	0.02	8.67- 9.67
11	Tetryl	1000.000	952.087	4.8	102	0.01	9.05- 9.85
12	2,4,6-Trinitrotoluene	1000.000	940.910	5.9	99	0.00	9.49-10.29
13	2-Amino-4,6-Dinitrotol	1000.000	1016.044	-1.6	101	0.00	9.94-10.74
14	4-Amino-2,6-Dinitrotol	1000.000	965.757	3.4	102	0.01	10.42-11.22
15 S	3,4-Dinitrotoluene	1000.000	955.825	4.4	98	0.02	10.71-11.51
16	2,4-Dinitrotoluene	1000.000	970.785	2.9	100	0.02	11.36-12.15
17	2,6-Dinitrotoluene	1000.000	951.023	4.9	101	0.02	11.81-12.61
18	o-Nitrotoluene	1000.000	1036.387	-3.6	104	0.03	14.72-15.72
19	p-Nitrotoluene	1000.000	1143.963	-14.4	101	0.02	15.32-16.32
20	m-Nitrotoluene	1000.000	1083.488	-8.3	103	0.01	16.22-17.22
21	PETN	5000.000	4981.042	0.4	102	-0.01	18.18-19.38

(#) = Out of Range

BB053996.D 8330B\_0331PLUS.M

SPCC's out = 0 CCC's out = 0

Mon Apr 03 12:57:25 2017

8.8.11

8

GC Semi-volatiles

Raw Data

6

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0329BPL\BB053979.D\dad1B.ch Vial: 11  
Signal #2 : C:\HPCHEM\1\DATA\0329BPL\BB053979.D\dad1A.ch  
Acq On : 31-Mar-2017, 03:27:22 Operator: evitam  
Sample : FA42152-1 Inst : G1315B  
Misc : op64396,gbbl567,10.1,,,50,1,SOIL Multiplr: 1.00  
IntFile Signal #1: events.e IntFile Signal #2: events2.e  
Quant Time: Mar 31 10:09:29 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
Title : Explosives by 8330A,8330B,8332  
Last Update : Fri Mar 31 10:06:47 2017  
Response via : Initial Calibration  
DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

Compound		RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
-----							
System Monitoring Compounds							
15) S	3,4-Dinitrotolue	11.13	11.13	992541	1722126	404.243	432.392
Spiked Amount		500.000	Range	69 - 134	Recovery	=	80.85% 86.48%
Target Compounds							
1)	TNX	0.00	0.00	0	0	N.D. d	N.D. d
2)	HMX	0.00	0.00	0	0	N.D. d	N.D. d
3)	DNX	0.00	0.00	0	0	N.D. d	N.D. d
4)	MNX	0.00	0.00	0	0	N.D. d	N.D. d
5)	RDX	0.00	0.00	0	0	N.D. d	N.D. d
6)	1,3,5-Trinitrobe	0.00	0.00	0	0	N.D. d	N.D. d
7)	1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8)	3,5-Dinitroanili	0.00	0.00	0	0	N.D. d	N.D. d
9)	Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
10)	Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11)	Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
12)	2,4,6-Trinitroto	0.00	0.00	0	0	N.D. d	N.D. d
13)	2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
14)	4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
16)	2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
17)	2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18)	o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
19)	p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20)	m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
21)	PETN	0.00	0.00	0	0	N.D. d	N.D. d

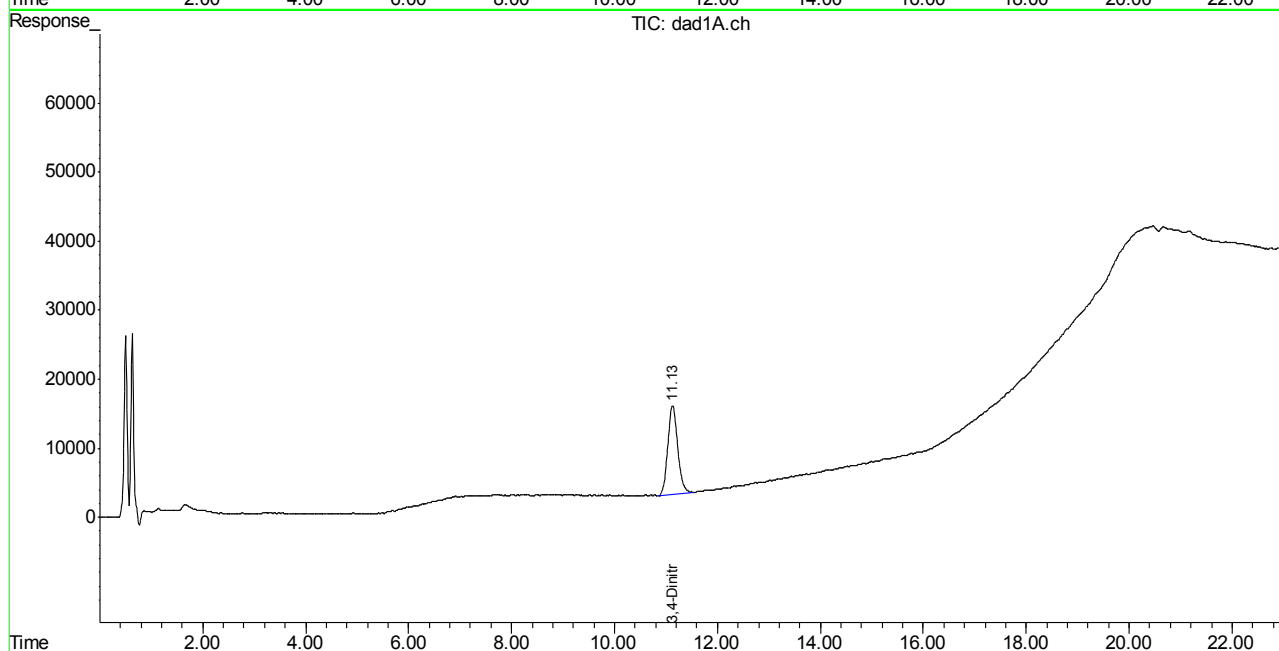
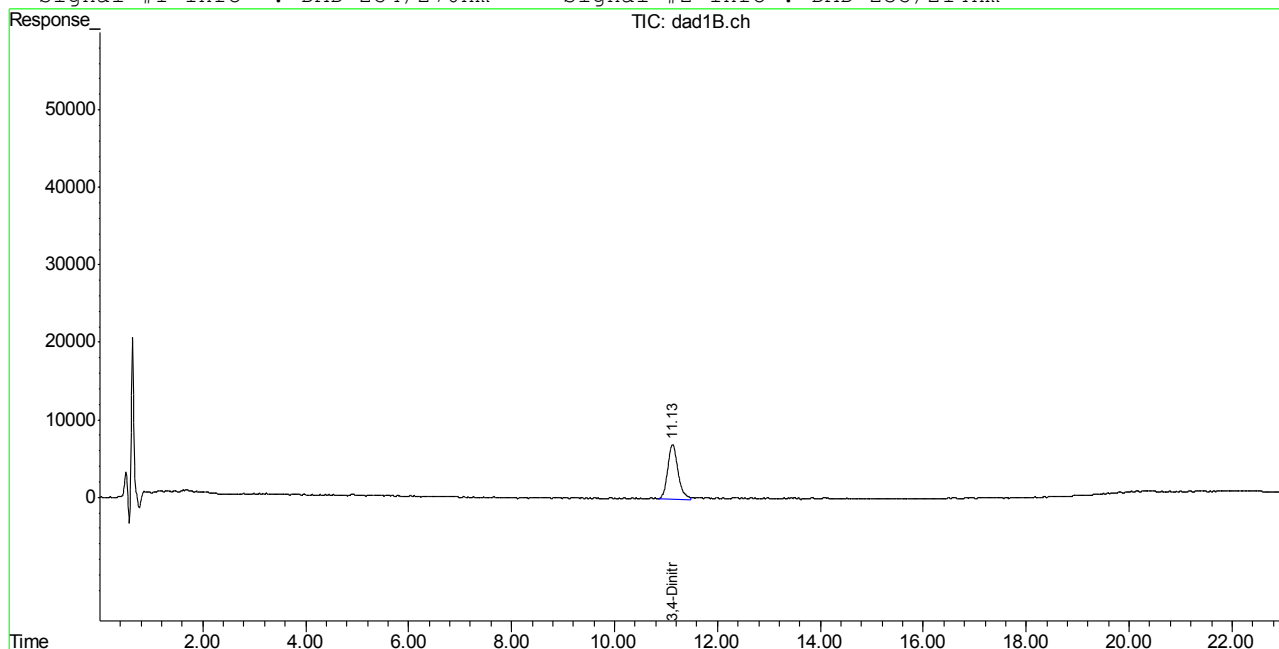
-----  
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.  
BB053979.D 8330B\_0331PLUS.M Mon Apr 03 11:46:48 2017

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0329BPL\BB053979.D\dad1B.ch Vial: 11  
Signal #2 : C:\HPCHEM\1\DATA\0329BPL\BB053979.D\dad1A.ch  
Acq On : 31-Mar-2017, 03:27:22 Operator: evitam  
Sample : FA42152-1 Inst : G1315B  
Misc : op64396, gbb1567, 10.1,,,50,1,SOIL Multiplr: 1.00  
IntFile Signal #1: events.e IntFile Signal #2: events2.e  
Quant Time: Mar 31 10:09 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
Title : Explosives by 8330A, 8330B, 8332  
Last Update : Fri Mar 31 10:06:47 2017  
Response via : Multiple Level Calibration  
DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm



Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0329BPL\BB053982.D\dad1B.ch Vial: 14  
 Signal #2 : C:\HPCHEM\1\DATA\0329BPL\BB053982.D\dad1A.ch  
 Acq On : 31-Mar-2017, 04:57:16 Operator: evitam  
 Sample : FA42152-2 Inst : G1315B  
 Misc : op64396,gbbl567,10.0,,,50,1,SOIL Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e  
 Quant Time: Mar 31 10:09:32 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
 Title : Explosives by 8330A,8330B,8332  
 Last Update : Fri Mar 31 10:06:47 2017  
 Response via : Initial Calibration  
 DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
 Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
 Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
-----						
System Monitoring Compounds						
15) S 3,4-Dinitrotolue	11.12	11.12	992266	1724470	404.131	432.972
Spiked Amount	500.000	Range	69 - 134	Recovery	=	80.83% 86.59%
Target Compounds						
1) TNX	0.00	0.00	0	0	N.D. d	N.D. d
2) HMX	0.00	0.00	0	0	N.D. d	N.D. d
3) DNX	0.00	0.00	0	0	N.D. d	N.D. d
4) MNX	0.00	0.00	0	0	N.D. d	N.D. d
5) RDX	0.00	0.00	0	0	N.D. d	N.D. d
6) 1,3,5-Trinitrobe	0.00	0.00	0	0	N.D. d	N.D. d
7) 1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8) 3,5-Dinitroanili	0.00	0.00	0	0	N.D. d	N.D. d
9) Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
10) Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11) Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
12) 2,4,6-Trinitroto	0.00	0.00	0	0	N.D. d	N.D. d
13) 2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
14) 4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
16) 2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
17) 2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18) o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
19) p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20) m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
21) PETN	0.00	0.00	0	0	N.D. d	N.D. d

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.  
 BB053982.D 8330B\_0331PLUS.M Mon Apr 03 11:46:49 2017

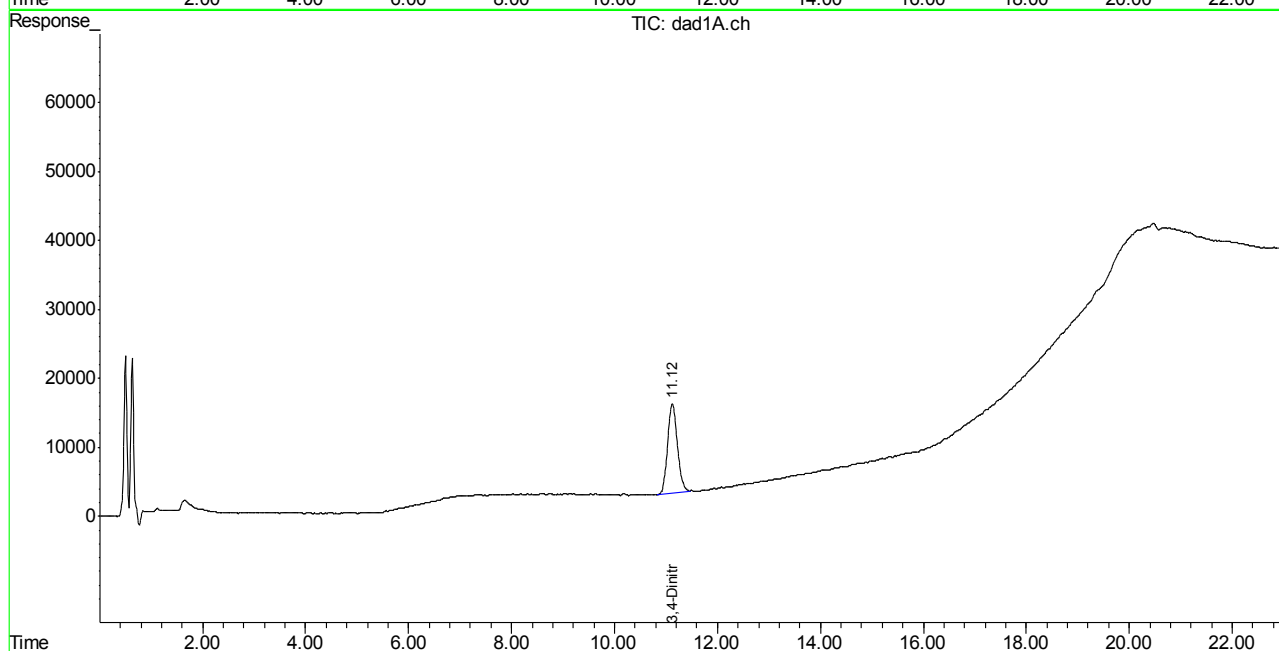
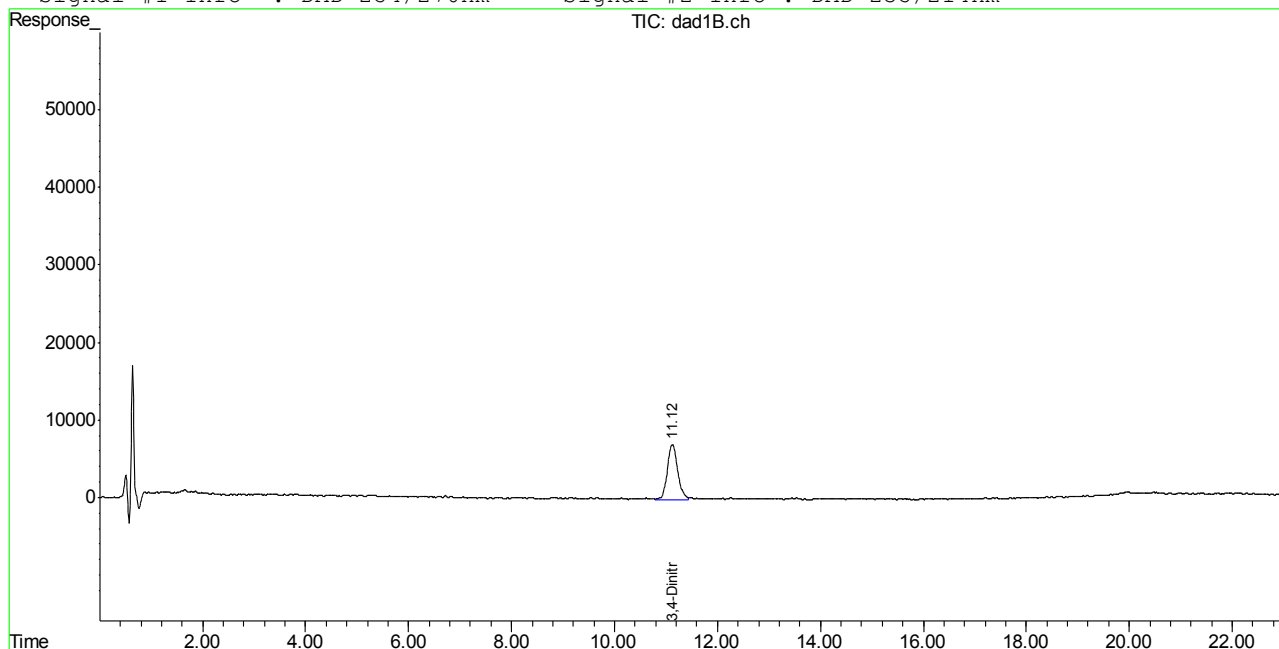


## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0329BPL\BB053982.D\dad1B.ch Vial: 14  
Signal #2 : C:\HPCHEM\1\DATA\0329BPL\BB053982.D\dad1A.ch  
Acq On : 31-Mar-2017, 04:57:16 Operator: evitam  
Sample : FA42152-2 Inst : G1315B  
Misc : op64396, gbb1567, 10.0,,,50,1,SOIL Multiplr: 1.00  
IntFile Signal #1: events.e IntFile Signal #2: events2.e  
Quant Time: Mar 31 10:12 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
Title : Explosives by 8330A, 8330B, 8332  
Last Update : Fri Mar 31 10:06:47 2017  
Response via : Multiple Level Calibration  
DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm



BB053982.D 8330B\_0331PLUS.M Mon Apr 03 11:46:49 2017

Page 2

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0329BPL\BB053983.D\dad1B.ch Vial: 15  
 Signal #2 : C:\HPCHEM\1\DATA\0329BPL\BB053983.D\dad1A.ch  
 Acq On : 31-Mar-2017, 05:27:17 Operator: evitam  
 Sample : FA42152-3 Inst : G1315B  
 Misc : op64396,gbbl567,10.0,,,50,1,SOIL Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e  
 Quant Time: Mar 31 10:09:33 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
 Title : Explosives by 8330A,8330B,8332  
 Last Update : Fri Mar 31 10:06:47 2017  
 Response via : Initial Calibration  
 DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
 Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
 Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
-----						
System Monitoring Compounds						
15) S 3,4-Dinitrotolue	11.12	11.12	1028903	1753694	419.052	440.199
Spiked Amount	500.000	Range	69 - 134	Recovery	=	83.81% 88.04%
Target Compounds						
1) TNX	0.00	0.00	0	0	N.D. d	N.D. d
2) HMX	0.00	0.00	0	0	N.D. d	N.D. d
3) DNX	0.00	0.00	0	0	N.D. d	N.D. d
4) MNX	0.00	0.00	0	0	N.D. d	N.D. d
5) RDX	0.00	0.00	0	0	N.D. d	N.D. d
6) 1,3,5-Trinitrobe	0.00	0.00	0	0	N.D. d	N.D. d
7) 1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8) 3,5-Dinitroanili	0.00	0.00	0	0	N.D. d	N.D. d
9) Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
10) Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11) Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
12) 2,4,6-Trinitroto	0.00	0.00	0	0	N.D. d	N.D. d
13) 2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
14) 4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
16) 2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
17) 2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18) o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
19) p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20) m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
21) PETN	0.00	0.00	0	0	N.D. d	N.D. d

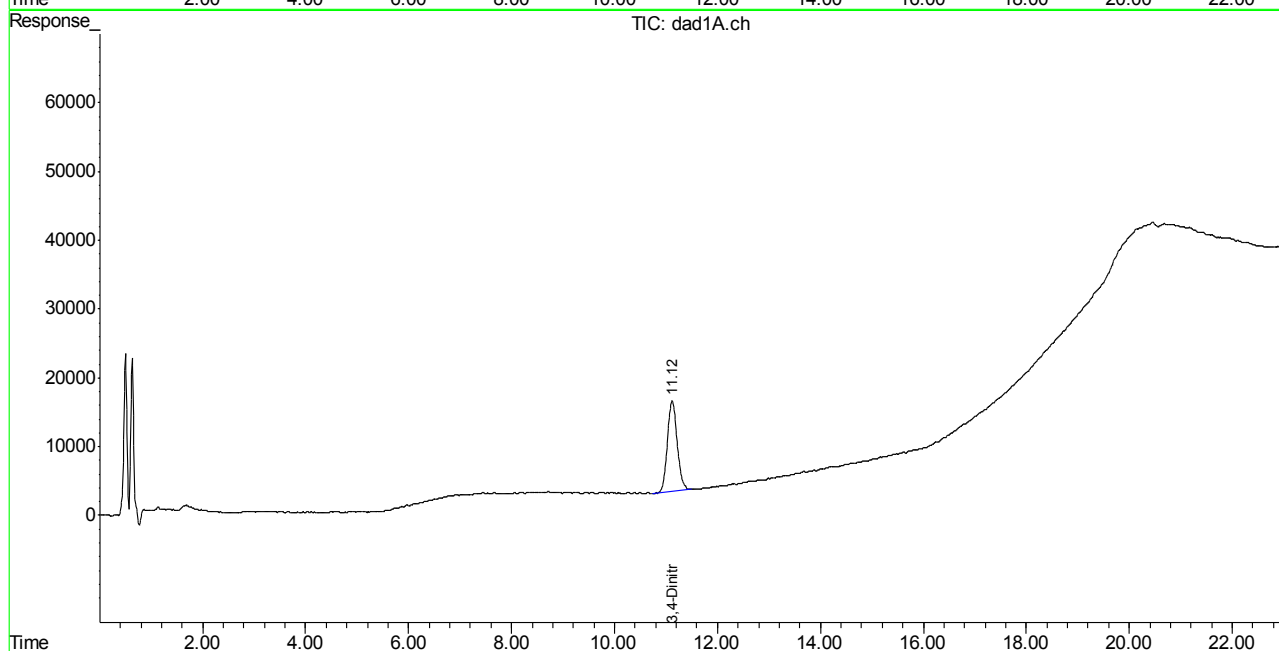
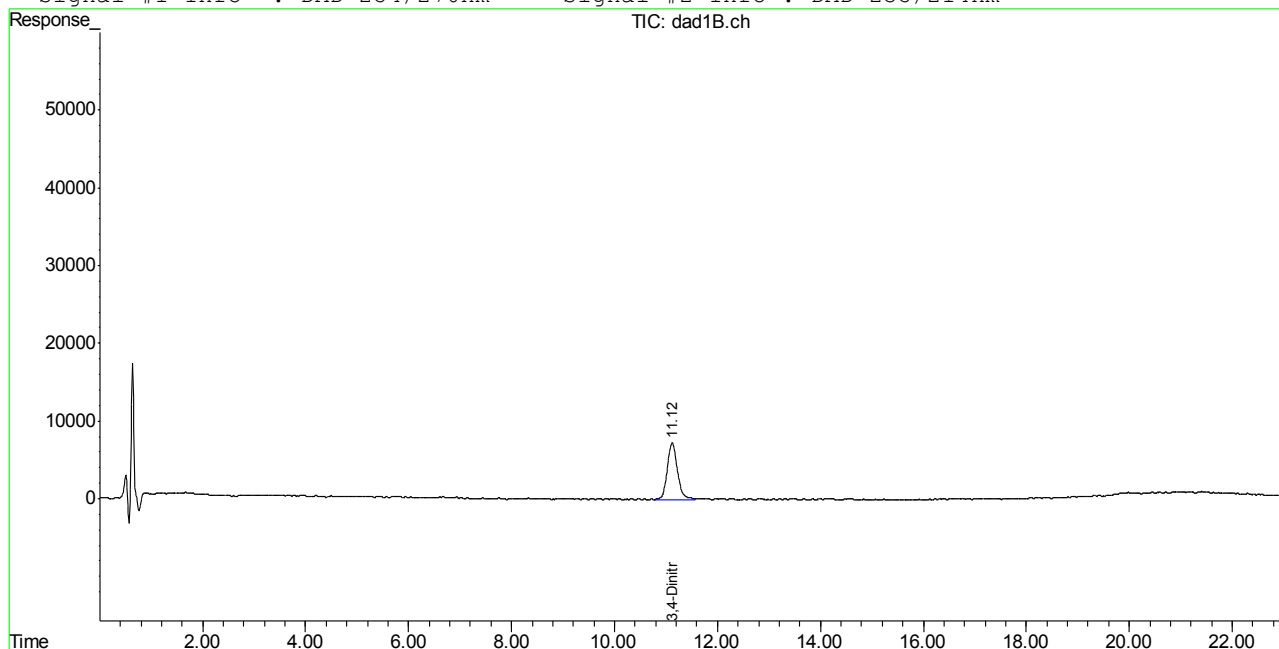
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.  
 BB053983.D 8330B\_0331PLUS.M Mon Apr 03 11:46:50 2017

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0329BPL\BB053983.D\dad1B.ch Vial: 15  
Signal #2 : C:\HPCHEM\1\DATA\0329BPL\BB053983.D\dad1A.ch  
Acq On : 31-Mar-2017, 05:27:17 Operator: evitam  
Sample : FA42152-3 Inst : G1315B  
Misc : op64396, gbb1567, 10.0,,,50,1,SOIL Multiplr: 1.00  
IntFile Signal #1: events.e IntFile Signal #2: events2.e  
Quant Time: Mar 31 10:12 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
Title : Explosives by 8330A, 8330B, 8332  
Last Update : Fri Mar 31 10:06:47 2017  
Response via : Multiple Level Calibration  
DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm



Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0329BPL\BB053986.D\dad1B.ch Vial: 18  
 Signal #2 : C:\HPCHEM\1\DATA\0329BPL\BB053986.D\dad1A.ch  
 Acq On : 31-Mar-2017, 06:57:11 Operator: evitam  
 Sample : FA42152-9 Inst : G1315B  
 Misc : op64396,gbbl567,10.1,,,50,1,SOIL Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e  
 Quant Time: Mar 31 10:09:36 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
 Title : Explosives by 8330A,8330B,8332  
 Last Update : Fri Mar 31 10:06:47 2017  
 Response via : Initial Calibration  
 DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
 Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
 Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
-----						
System Monitoring Compounds						
15) S 3,4-Dinitrotolue	11.12	11.12	1034287	1788208	421.245	448.730
Spiked Amount	500.000	Range	69 - 134	Recovery	=	84.25% 89.75%
Target Compounds						
1) TNX	0.00	0.00	0	0	N.D. d	N.D. d
2) HMX	0.00	0.00	0	0	N.D. d	N.D. d
3) DNX	0.00	0.00	0	0	N.D. d	N.D. d
4) MNX	0.00	0.00	0	0	N.D. d	N.D. d
5) RDX	0.00	0.00	0	0	N.D. d	N.D. d
6) 1,3,5-Trinitrobe	0.00	0.00	0	0	N.D. d	N.D. d
7) 1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8) 3,5-Dinitroanili	0.00	0.00	0	0	N.D. d	N.D. d
9) Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
10) Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11) Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
12) 2,4,6-Trinitroto	0.00	0.00	0	0	N.D. d	N.D. d
13) 2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
14) 4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
16) 2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
17) 2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18) o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
19) p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20) m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
21) PETN	0.00	0.00	0	0	N.D. d	N.D. d

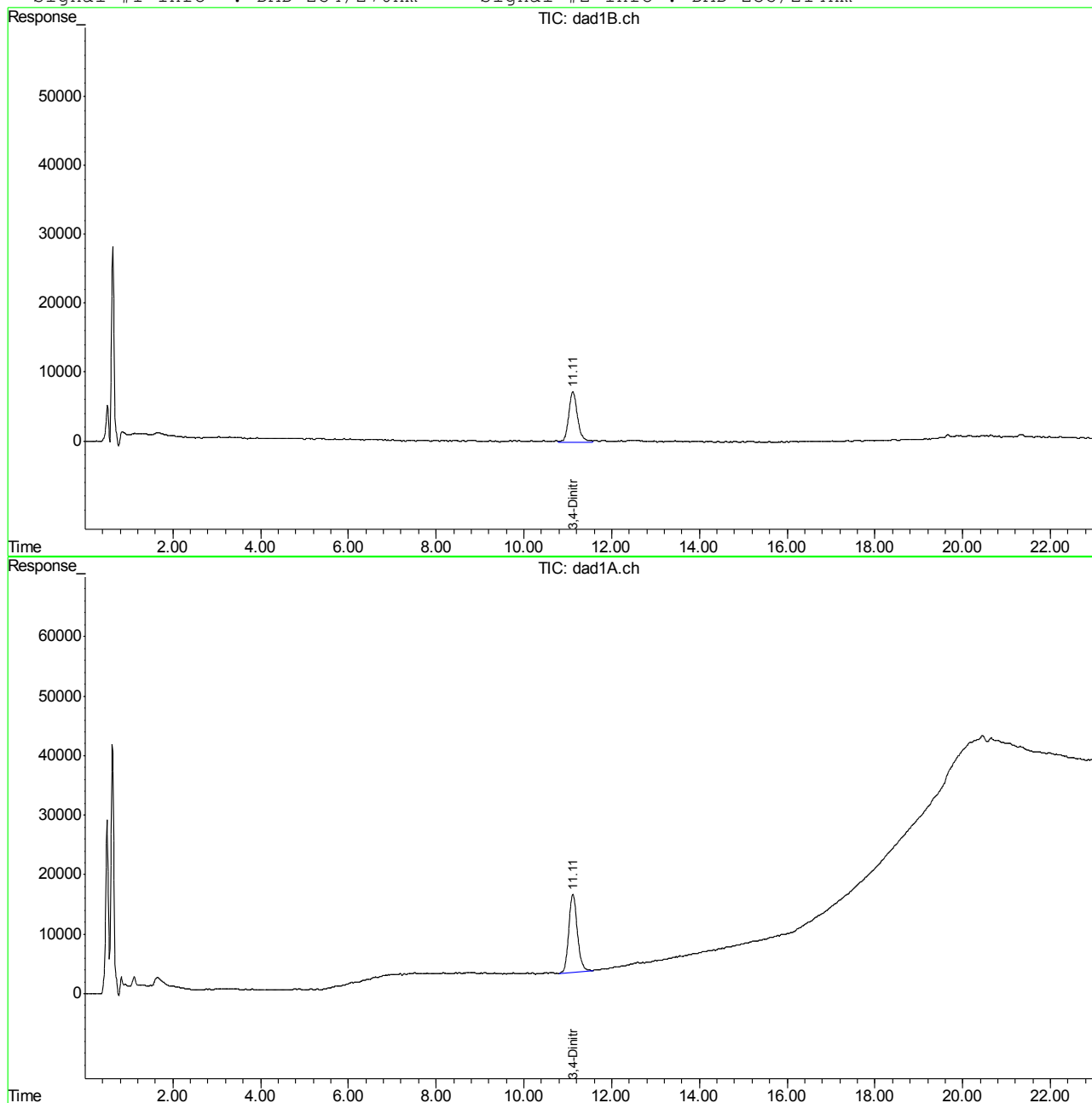
-----  
 (f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.  
 BB053986.D 8330B\_0331PLUS.M Mon Apr 03 11:46:51 2017

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0329BPL\BB053986.D\dad1B.ch Vial: 18  
Signal #2 : C:\HPCHEM\1\DATA\0329BPL\BB053986.D\dad1A.ch  
Acq On : 31-Mar-2017, 06:57:11 Operator: evitam  
Sample : FA42152-9 Inst : G1315B  
Misc : op64396, gbb1567, 10.1,,,50,1,SOIL Multiplr: 1.00  
IntFile Signal #1: events.e IntFile Signal #2: events2.e  
Quant Time: Mar 31 10:14 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
Title : Explosives by 8330A,8330B,8332  
Last Update : Fri Mar 31 10:06:47 2017  
Response via : Multiple Level Calibration  
DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm



BB053986.D 8330B\_0331PLUS.M Mon Apr 03 11:46:51 2017

Page 2

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0329BPL\BB053976.D\dad1B.ch Vial: 10  
 Signal #2 : C:\HPCHEM\1\DATA\0329BPL\BB053976.D\dad1A.ch  
 Acq On : 31-Mar-2017, 01:57:26 Operator: evitam  
 Sample : OP64396-MB Inst : G1315B  
 Misc : op64396, gbb1567, 10.0,,,50,1,SOIL Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e  
 Quant Time: Mar 31 09:04:05 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
 Title : Explosives by 8330A,8330B,8332  
 Last Update : Mon Mar 27 10:20:22 2017  
 Response via : Initial Calibration  
 DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
 Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
 Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
-----						
System Monitoring Compounds						
15) S 3,4-Dinitrotolue	11.14	11.14	995158	1729417	405.309	434.196
Spiked Amount	500.000	Range	69 - 134	Recovery	=	81.06% 86.84%
Target Compounds						
1) TNX	0.00	0.00	0	0	N.D. d	N.D. d
2) HMX	0.00	0.00	0	0	N.D. d	N.D. d
3) DNX	0.00	0.00	0	0	N.D. d	N.D. d
4) MNX	0.00	0.00	0	0	N.D. d	N.D. d
5) RDX	0.00	0.00	0	0	N.D. d	N.D. d
6) 1,3,5-Trinitrobe	0.00	0.00	0	0	N.D. d	N.D. d
7) 1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8) 3,5-Dinitroanili	0.00	0.00	0	0	N.D. d	N.D. d
9) Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
10) Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11) Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
12) 2,4,6-Trinitroto	0.00	0.00	0	0	N.D. d	N.D. d
13) 2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
14) 4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
16) 2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
17) 2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18) o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
19) p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20) m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
21) PETN	0.00	0.00	0	0	N.D. d	N.D. d

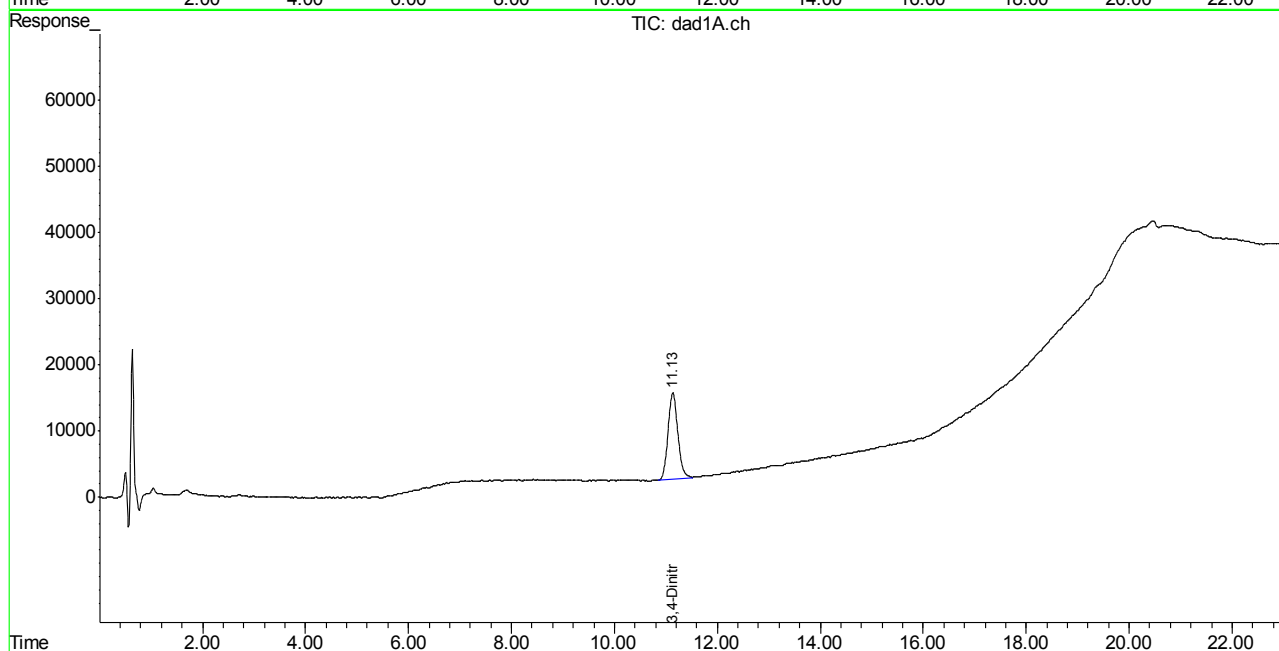
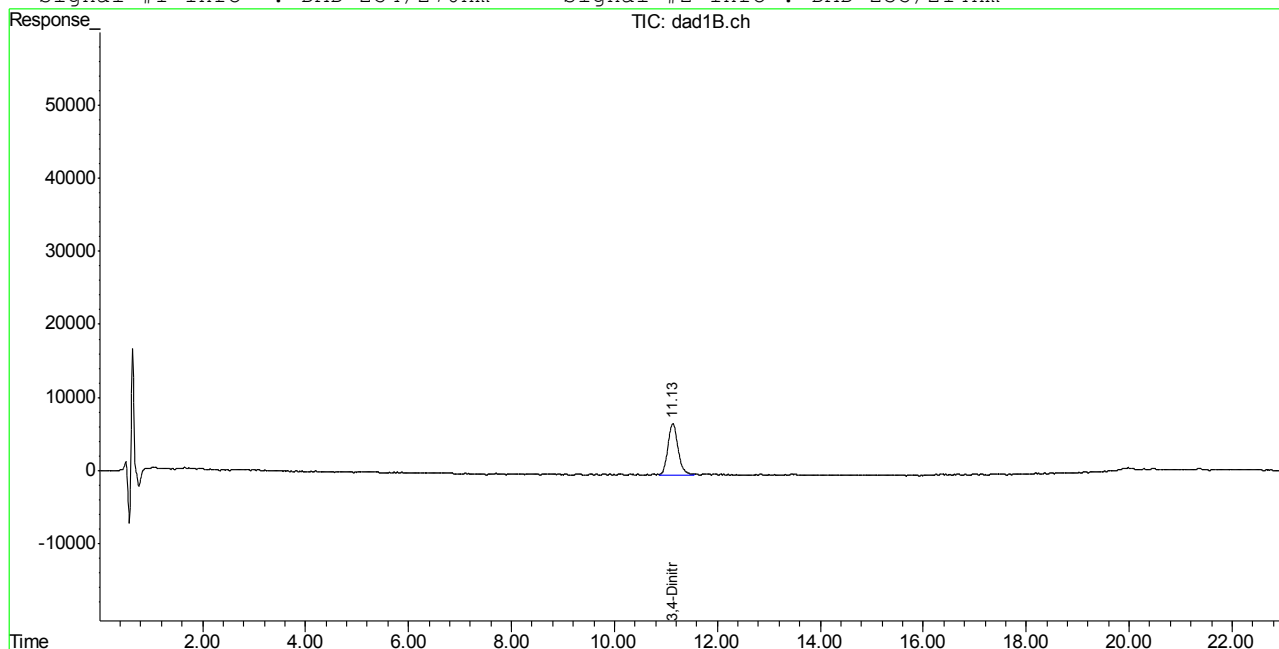
-----  
 (f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.  
 BB053976.D 8330B\_0324PLUS.M Fri Mar 31 10:49:24 2017

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0329BPL\BB053976.D\dad1B.ch Vial: 10  
Signal #2 : C:\HPCHEM\1\DATA\0329BPL\BB053976.D\dad1A.ch  
Acq On : 31-Mar-2017, 01:57:26 Operator: evitam  
Sample : OP64396-MB Inst : G1315B  
Misc : op64396, gbb1567, 10.0,,,50,1,SOIL Multiplr: 1.00  
IntFile Signal #1: events.e IntFile Signal #2: events2.e  
Quant Time: Mar 31 10:03 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
Title : Explosives by 8330A, 8330B, 8332  
Last Update : Mon Mar 27 10:20:22 2017  
Response via : Multiple Level Calibration  
DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm



BB053976.D 8330B\_0324PLUS.M Fri Mar 31 10:49:24 2017

Page 2

(b) (6)  
04/03/17 18:47

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0403BPL\BB054004.D\dad1B.ch Vial: 8  
 Signal #2 : C:\HPCHEM\1\DATA\0403BPL\BB054004.D\dad1A.ch  
 Acq On : 03-Apr-2017, 09:22:26 Operator: evitam  
 Sample : OP64396-BS Inst : G1315B  
 Misc : op64396, gbb1569, 10.0, , , 50, 1, SOIL Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e  
 Quant Time: Apr 03 11:19:40 2017 Quant Results File: 8330B\_0331PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0331PLUS.M (Chemstation Integrator)  
 Title : Explosives by 8330A, 8330B, 8332  
 Last Update : Fri Mar 31 15:52:11 2017  
 Response via : Initial Calibration  
 DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
 Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
 Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
-----						
System Monitoring Compounds						
15) S 3,4-Dinitrotolue	11.10	11.10	1047374	1802185	435.766	442.264
Spiked Amount	500.000	Range	69 - 134	Recovery	=	87.15% 88.45%
Target Compounds						
1) TNX	0.00	0.00	0	0	N.D. d	N.D. d
2) HMX	1.57	1.57	846306	2303828	487.840	467.898
3) DNx	0.00	0.00	0	0	N.D.	N.D.
4) MNX	0.00	0.00	0	0	N.D.	N.D.
5) RDX	3.09	3.09	849303	1379416	394.542	406.194
6) 1,3,5-Trinitrobe	4.85	4.85	1869391	3629111	423.286	418.569
7) 1,3-Dinitrobenze	6.11	6.11	2329723	1609988	407.529	413.469m
8) 3,5-Dinitroanili	6.52	6.52	1871352	3147992	384.838	392.855m
9) Nitrobenzene	7.64	7.64	1486761	1405796	457.356	461.051m
10) Nitroglycerin	0.00	9.19	0	2947069	N.D. d	2404.213
11) Tetryl	9.45	9.45	1266949	2065054	395.340	397.812
12) 2,4,6-Trinitroto	9.88	9.88	1464155	1776465	353.631	369.841
13) 2-Amino-4,6-Dini	10.32	10.32	1555292	2337018	452.253	467.121
14) 4-Amino-2,6-Dini	10.81	10.81	1092486	2181430	405.480	431.096
16) 2,4-Dinitrotolue	11.74	11.74	2227873	1467612	422.576	449.292
17) 2,6-Dinitrotolue	12.21	12.20	1294444	1689758	427.675	447.485
18) o-Nitrotoluene	15.20	15.20	1046376	1393878	457.210	552.558m
19) p-Nitrotoluene	15.80	15.80	1553705	1236683	462.506	506.223
20) m-Nitrotoluene	16.70	16.70	1511512	1776286	528.608	481.809m
21) PETN	0.00	18.75	0	3171112	N.D. d	2343.899m

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.  
 BB054004.D 8330B\_0331PLUS.M Mon Apr 03 11:21:32 2017

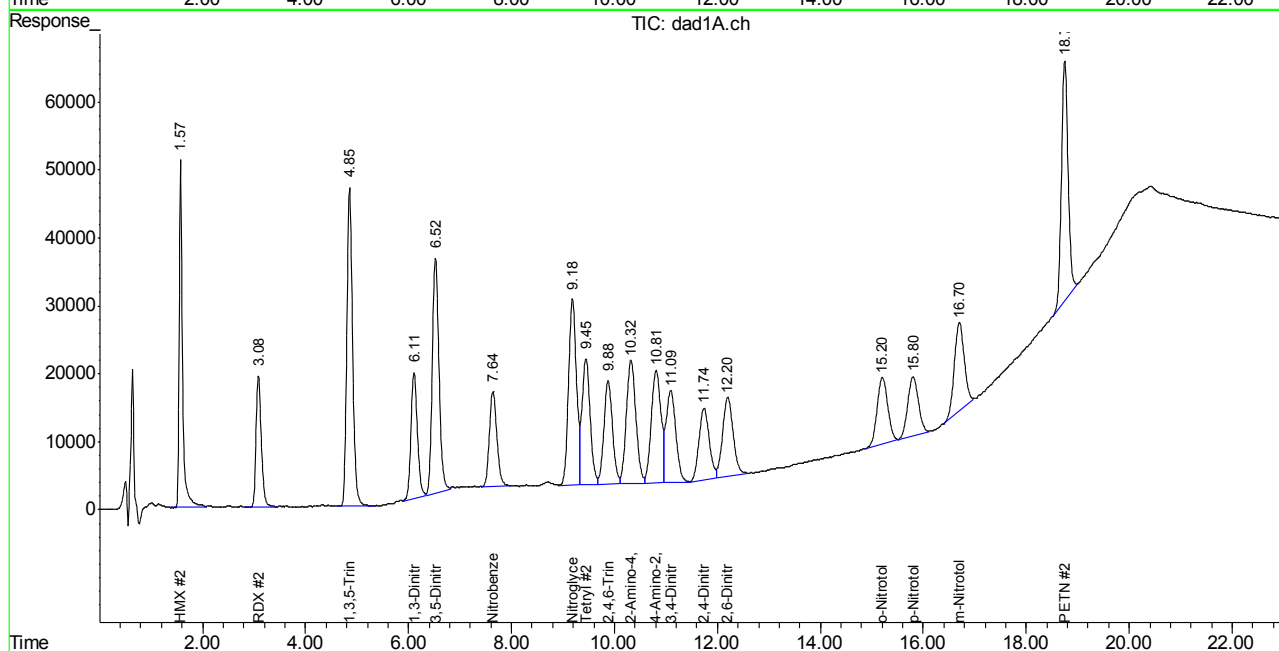
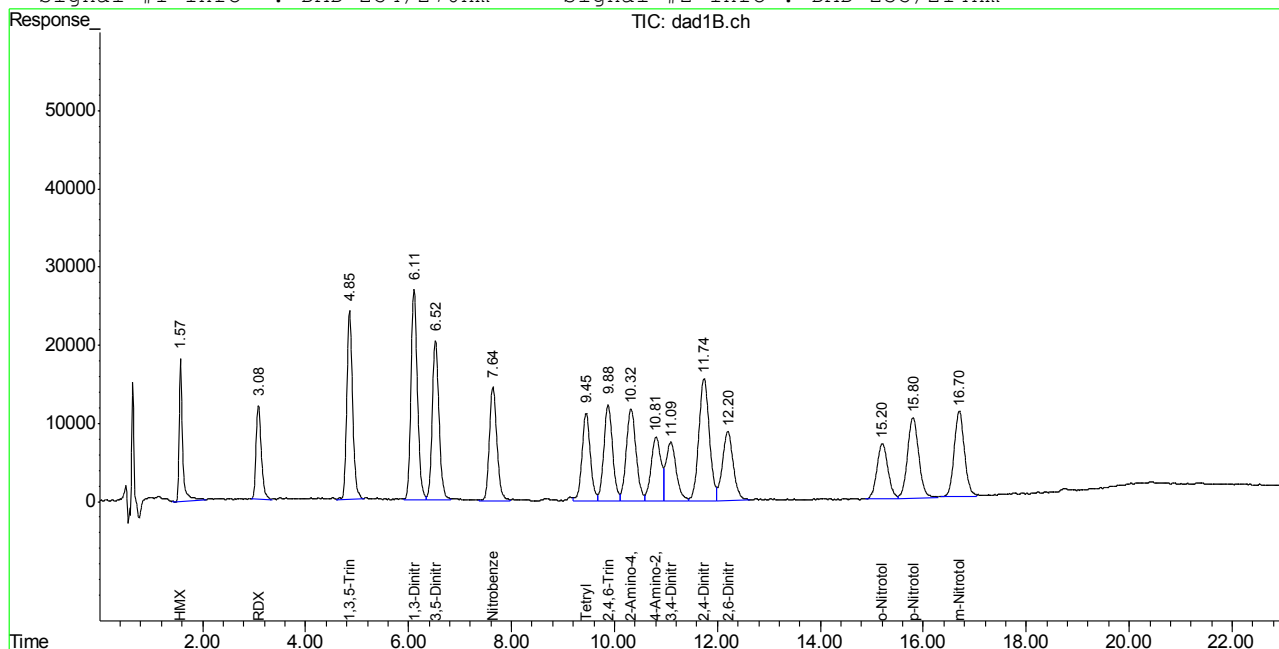


## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0403BPL\BB054004.D\dad1B.ch Vial: 8  
Signal #2 : C:\HPCHEM\1\DATA\0403BPL\BB054004.D\dad1A.ch  
Acq On : 03-Apr-2017, 09:22:26 Operator: evitam  
Sample : OP64396-BS Inst : G1315B  
Misc : op64396, gbb1569, 10.0,,,50,1,SOIL Multiplr: 1.00  
IntFile Signal #1: events.e IntFile Signal #2: events2.e  
Quant Time: Apr 3 11:20 2017 Quant Results File: 8330B\_0331PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0331PLUS.M (Chemstation Integrator)  
Title : Explosives by 8330A,8330B,8332  
Last Update : Fri Mar 31 15:52:11 2017  
Response via : Multiple Level Calibration  
DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm



## Manual Integration Approval Summary

Page 1 of 1

**Sample Number:** OP64396-BS  
**Lab FileID:** BB054004.D  
**Injection Time:** 04/03/17 09:22

**Method:** SW846 8330B  
**Analyst approved:** 04/03/17 11:22  
**Supervisor approved:** 04/03/17 18:47

(b) (6)  
(b) (6)

Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3-Dinitrobenzene	99-65-0	2	6.11	Poorly defined baseline
3,5-Dinitroaniline	618-87-1	2	6.52	Poorly defined baseline
Nitrobenzene	98-95-3	2	7.64	Poorly defined baseline
o-Nitrotoluene	88-72-2	2	15.20	Poorly defined baseline
m-Nitrotoluene	99-08-1	2	16.70	Poorly defined baseline
PETN	78-11-5	2	18.75	Poorly defined baseline

9.3.1.1

9

(b) (6)  
04/03/17 18:47

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0403BPL\BB054005.D\dad1B.ch Vial: 9  
 Signal #2 : C:\HPCHEM\1\DATA\0403BPL\BB054005.D\dad1A.ch  
 Acq On : 03-Apr-2017, 09:52:19 Operator: evitam  
 Sample : OP64396-PT1 Inst : G1315B  
 Misc : op64396, gbb1569, 10.0,,,50,1,SOIL Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e  
 Quant Time: Apr 03 11:20:29 2017 Quant Results File: 8330B\_0331PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0331PLUS.M (Chemstation Integrator)  
 Title : Explosives by 8330A,8330B,8332  
 Last Update : Fri Mar 31 15:52:11 2017  
 Response via : Initial Calibration  
 DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
 Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
 Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
-----						
System Monitoring Compounds						
15) S 3,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
Spiked Amount	500.000	Range	69 - 134	Recovery	=	0.00%# 0.00%#
Target Compounds						
1) TNX	0.00	0.00	0	0	N.D. d	N.D. d
2) HMX	1.57	1.57	191082	525303	106.058	101.283
3) DNx	0.00	0.00	0	0	N.D.	N.D.
4) MNx	0.00	0.00	0	0	N.D.	N.D.
5) RDX	3.08	3.08	175351	272321	81.459	80.190
6) 1,3,5-Trinitrobe	4.85	4.85	490201	973866	110.996m	112.322
7) 1,3-Dinitrobenze	6.11	6.11	932808	649011	163.172m	166.676m
8) 3,5-Dinitroanili	6.52	6.52	1288914	2248345	265.062m	280.583m
9) Nitrobenzene	7.64	7.64	689954	658049	212.243	215.817m
10) Nitroglycerin	0.00	9.19	0	197775	N.D. d	161.344
11) Tetryl	9.44	9.45	238558	404425	74.440	77.908
12) 2,4,6-Trinitroto	9.87	9.88	426783	487582	103.079	101.509
13) 2-Amino-4,6-Dini	10.33	10.32	335459	490849	95.198	97.327
14) 4-Amino-2,6-Dini	10.82	10.81	275357	582343	102.200	115.083
16) 2,4-Dinitrotolue	11.74	11.74	512469	323940	97.203	99.171
17) 2,6-Dinitrotolue	12.20	12.21	663255	852718	219.135	225.819
18) o-Nitrotoluene	15.22	15.22	500643	710283	218.754	308.037 #
19) p-Nitrotoluene	15.81	15.82	1052861	871579	313.415	356.772
20) m-Nitrotoluene	16.70	16.72	599306	739666	228.746	200.631m
21) PETN	0.00	18.76	0	267489	N.D. d	197.712m

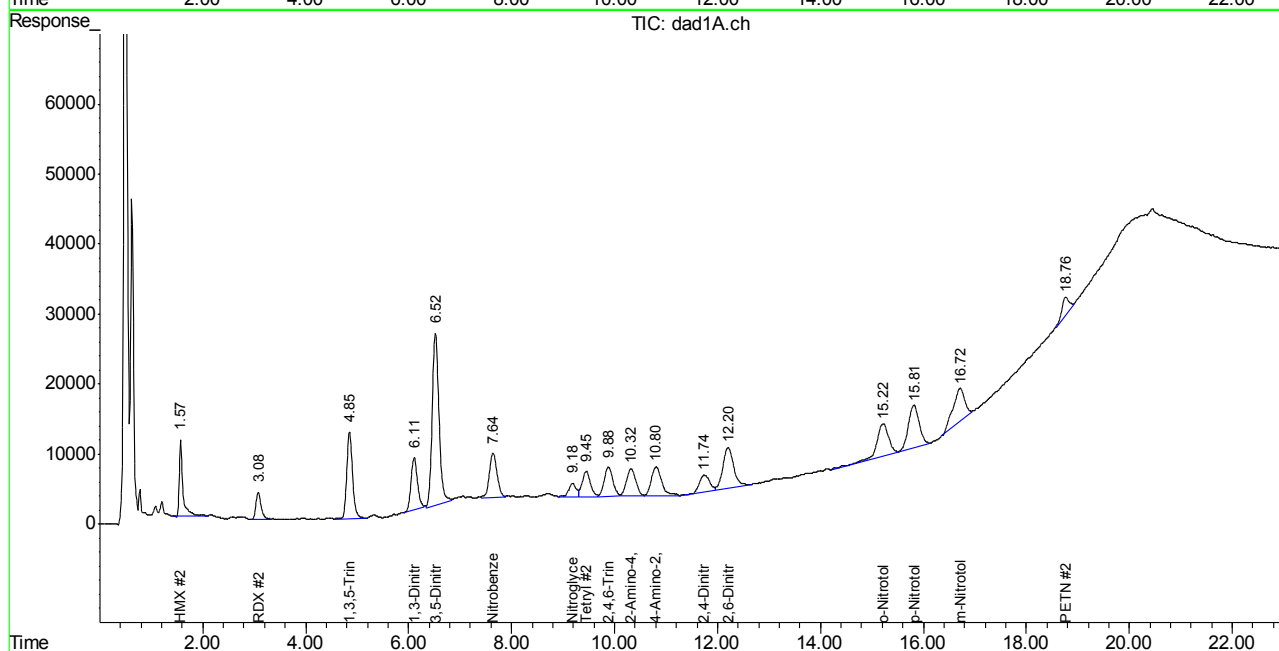
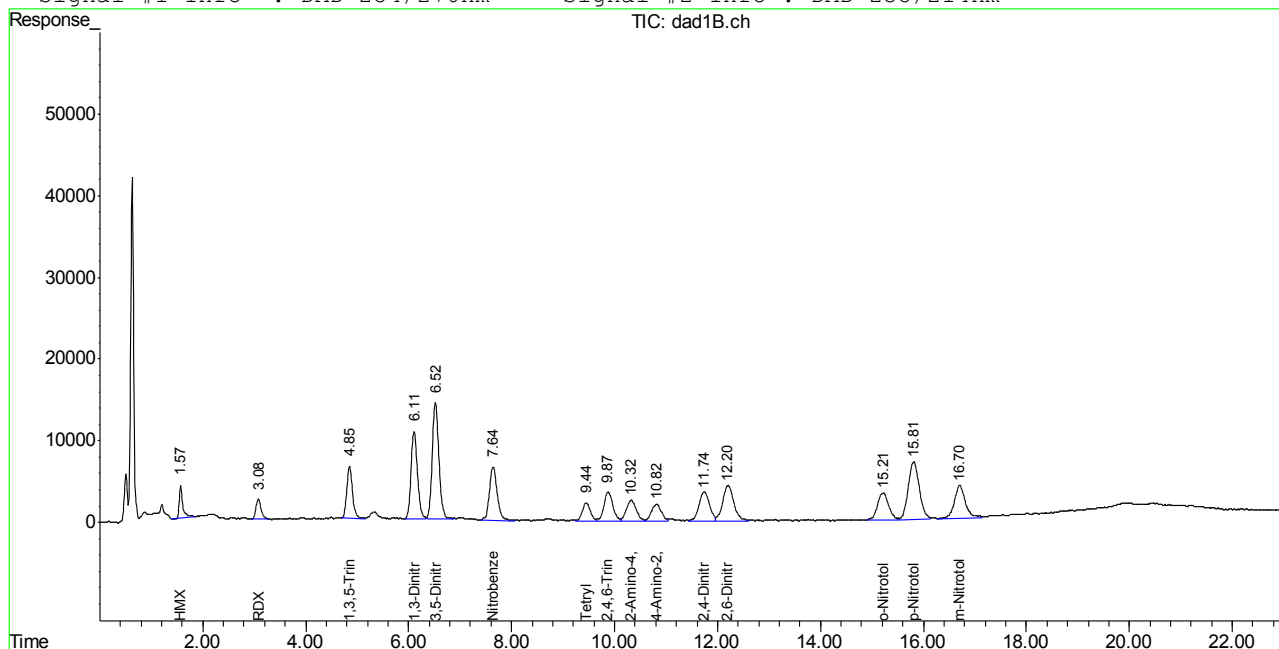
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.  
 BB054005.D 8330B\_0331PLUS.M Mon Apr 03 13:05:14 2017

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0403BPL\BB054005.D\dad1B.ch Vial: 9  
Signal #2 : C:\HPCHEM\1\DATA\0403BPL\BB054005.D\dad1A.ch  
Acq On : 03-Apr-2017, 09:52:19 Operator: evitam  
Sample : OP64396-PT1 Inst : G1315B  
Misc : op64396, gbb1569, 10.0,,, 50, 1, SOIL Multiplr: 1.00  
IntFile Signal #1: events.e IntFile Signal #2: events2.e  
Quant Time: Apr 3 13:05 2017 Quant Results File: 8330B\_0331PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0331PLUS.M (Chemstation Integrator)  
Title : Explosives by 8330A, 8330B, 8332  
Last Update : Fri Mar 31 15:52:11 2017  
Response via : Multiple Level Calibration  
DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm



## Manual Integration Approval Summary

Page 1 of 1

**Sample Number:** OP64396-PT1  
**Lab FileID:** BB054005.D  
**Injection Time:** 04/03/17 09:52

**Method:** SW846 8330B  
**Analyst approved:** 04/03/17 11:22  
**Supervisor approved:** 04/03/17 18:47

(b) (6)

(b) (6)

Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3-Dinitrobenzene	99-65-0	2	6.11	Poorly defined baseline
3,5-Dinitroaniline	618-87-1	2	6.52	Poorly defined baseline
Nitrobenzene	98-95-3	2	7.64	Poorly defined baseline
m-Nitrotoluene	99-08-1	2	16.72	Poorly defined baseline
PETN	78-11-5	2	18.76	Poorly defined baseline

9.4.1.1

9

(b) (6)  
04/03/17 18:49

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0329BPL\BB053980.D\dad1B.ch Vial: 12  
 Signal #2 : C:\HPCHEM\1\DATA\0329BPL\BB053980.D\dad1A.ch  
 Acq On : 31-Mar-2017, 03:57:20 Operator: evitam  
 Sample : OP64396-MS Inst : G1315B  
 Misc : op64396, gbb1567, 10.0, , , 50, 1, SOIL Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e  
 Quant Time: Mar 31 10:09:30 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
 Title : Explosives by 8330A, 8330B, 8332  
 Last Update : Fri Mar 31 10:06:47 2017  
 Response via : Initial Calibration  
 DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
 Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
 Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
-----						
System Monitoring Compounds						
15) S 3,4-Dinitrotolue	11.12	11.12	1064658	1782565	433.615	447.336
Spiked Amount	500.000	Range	69 - 134	Recovery	=	86.72% 89.47%
Target Compounds						
1) TNX	0.00	0.00	0	0	N.D. d	N.D. d
2) HMX	1.57	1.57	755777	2098522	405.521	435.441m
3) DNx	0.00	0.00	0	0	N.D.	N.D.
4) MNX	0.00	0.00	0	0	N.D.	N.D.
5) RDX	3.09	3.09	752164	1204758	373.552	378.619
6) 1,3,5-Trinitrobe	4.86	4.86	1705605	3388735	338.218	348.132
7) 1,3-Dinitrobenze	6.12	6.11	2141444	1448891	376.206	371.464m
8) 3,5-Dinitroanili	6.54	6.53	1748165	2884734	409.920	400.754m
9) Nitrobenzene	7.65	7.64	1400660	1410079	409.189	445.132m
10) Nitroglycerin	0.00	9.20	0	2875775	N.D. d	2233.913
11) Tetryl	9.47	9.47	1131508	1873892	713.628	800.853
12) 2,4,6-Trinitroto	9.90	9.90	1357715	1631878	614.532	493.319
13) 2-Amino-4,6-Dini	10.35	10.35	1444374	2130759	414.001	421.356
14) 4-Amino-2,6-Dini	10.84	10.84	998440	1969048	400.072	435.341
16) 2,4-Dinitrotolue	11.77	11.77	2052602	1315063	397.544	414.606
17) 2,6-Dinitrotolue	12.23	12.23	1212153	1545509	395.177	427.588
18) o-Nitrotoluene	15.23	15.22	998606	1339555	405.361	408.976
19) p-Nitrotoluene	15.83	15.82	1496551	1166831	413.034	431.353
20) m-Nitrotoluene	16.72	16.72	1466244	1725881	399.798	441.475m
21) PETN	0.00	18.77	0	3118377	N.D. d	2377.178m

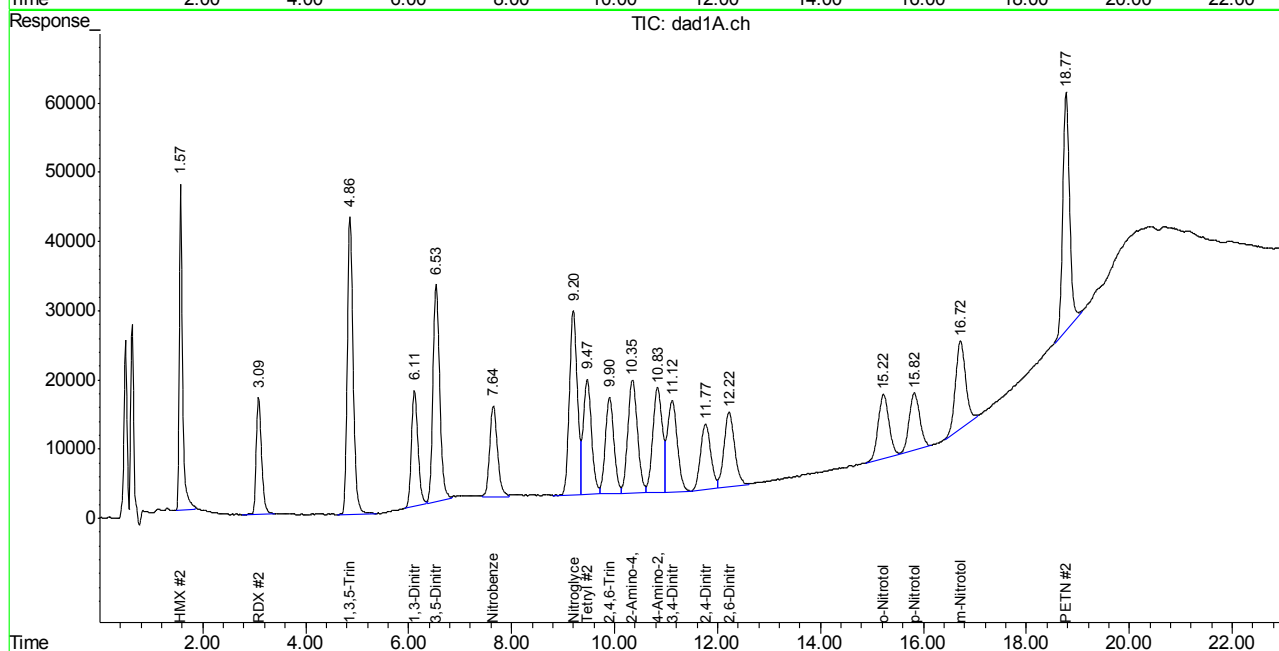
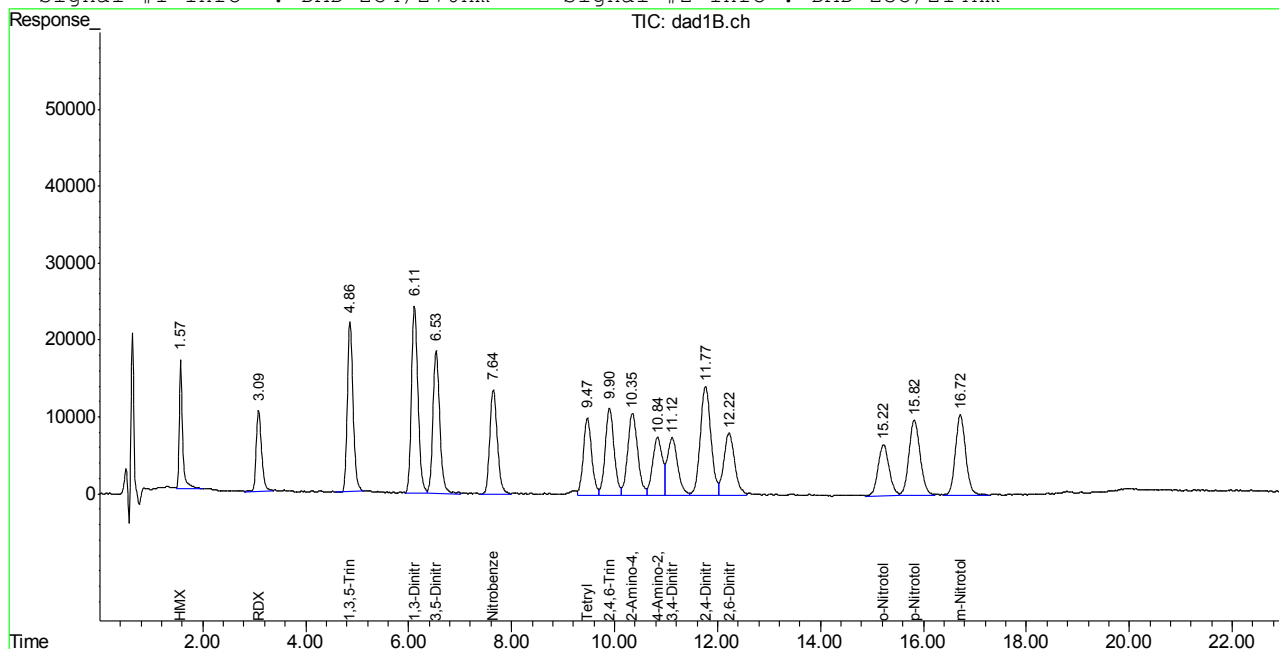
-----  
 (f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.  
 BB053980.D 8330B\_0324PLUS.M Fri Mar 31 10:49:26 2017

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0329BPL\BB053980.D\dad1B.ch Vial: 12  
Signal #2 : C:\HPCHEM\1\DATA\0329BPL\BB053980.D\dad1A.ch  
Acq On : 31-Mar-2017, 03:57:20 Operator: evitam  
Sample : OP64396-MS Inst : G1315B  
Misc : op64396, gbb1567, 10.0,,,50,1,SOIL Multiplr: 1.00  
IntFile Signal #1: events.e IntFile Signal #2: events2.e  
Quant Time: Mar 31 10:10 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
Title : Explosives by 8330A,8330B,8332  
Last Update : Fri Mar 31 10:06:47 2017  
Response via : Multiple Level Calibration  
DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm



# Manual Integration Approval Summary

Page 1 of 1

**Sample Number:** OP64396-MS  
**Lab FileID:** BB053980.D  
**Injection Time:** 03/31/17 03:57

**Method:** SW846 8330B  
**Analyst approved:** 04/03/17 07:30 (b) (6)  
**Supervisor approved:** 04/03/17 18:49 (b) (6)

Parameter	CAS	Sig#	R.T. (min.)	Reason
HMX	2691-41-0	2	1.57	Poorly defined baseline
1,3-Dinitrobenzene	99-65-0	2	6.11	Poorly defined baseline
3,5-Dinitroaniline	618-87-1	2	6.53	Poorly defined baseline
Nitrobenzene	98-95-3	2	7.64	Poorly defined baseline
m-Nitrotoluene	99-08-1	2	16.72	Poorly defined baseline
PETN	78-11-5	2	18.77	Poorly defined baseline

9.5.1.1

9



(b) (6)  
04/03/17 18:49

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0329BPL\BB053981.D\dad1B.ch Vial: 13  
 Signal #2 : C:\HPCHEM\1\DATA\0329BPL\BB053981.D\dad1A.ch  
 Acq On : 31-Mar-2017, 04:27:20 Operator: evitam  
 Sample : OP64396-MSD Inst : G1315B  
 Misc : op64396, gbb1567, 10.0,,,50,1,SOIL Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e  
 Quant Time: Mar 31 10:09:31 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
 Title : Explosives by 8330A,8330B,8332  
 Last Update : Fri Mar 31 10:06:47 2017  
 Response via : Initial Calibration  
 DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
 Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
 Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
-----						
System Monitoring Compounds						
15) S 3,4-Dinitrotolue	11.12	11.12	1064003	1824470	433.348	457.688
Spiked Amount	500.000	Range	69 - 134	Recovery	=	86.67% 91.54%
Target Compounds						
1) TNX	0.00	0.00	0	0	N.D. d	N.D. d
2) HMX	1.57	1.57	728608	2077042	390.944	431.014
3) DNx	0.00	0.00	0	0	N.D.	N.D.
4) MNx	0.00	0.00	0	0	N.D.	N.D.
5) RDX	3.09	3.09	806014	1253359	400.296	393.892
6) 1,3,5-Trinitrobe	4.86	4.86	1747124	3449412	346.451	354.365
7) 1,3-Dinitrobenze	6.12	6.11	2199185	1500295	386.350	384.643m
8) 3,5-Dinitroanili	6.53	6.53	1761754	2926467	413.101	406.477m
9) Nitrobenzene	7.65	7.64	1415968	1337919	413.661	422.352m
10) Nitroglycerin	0.00	9.19	0	2947845	N.D. d	2289.897m
11) Tetryl	9.47	9.46	1153461	1925644	727.473	822.970m
12) 2,4,6-Trinitroto	9.90	9.90	1374035	1640937	621.919	496.058m
13) 2-Amino-4,6-Dini	10.35	10.34	1474665	2160083	422.683	427.155m
14) 4-Amino-2,6-Dini	10.84	10.83	1018953	2050636	408.291	453.380
16) 2,4-Dinitrotolue	11.77	11.77	2102404	1354698	407.190	427.102
17) 2,6-Dinitrotolue	12.23	12.23	1237850	1562755	403.554	432.359
18) o-Nitrotoluene	15.22	15.22	1036655	1361044	420.806	415.537m
19) p-Nitrotoluene	15.82	15.83	1535966	1195947	423.912	442.117
20) m-Nitrotoluene	16.72	16.72	1513777	1716254	412.759	439.013m
21) PETN	0.00	18.77	0	3154705	N.D. d	2404.871m

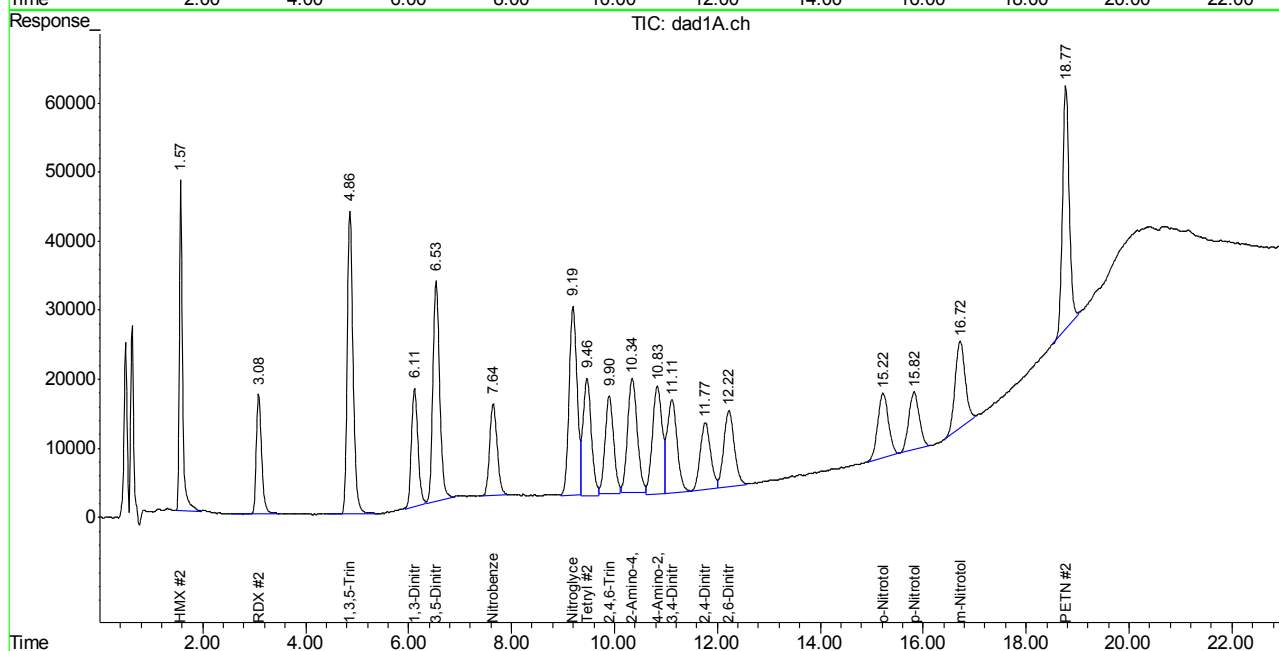
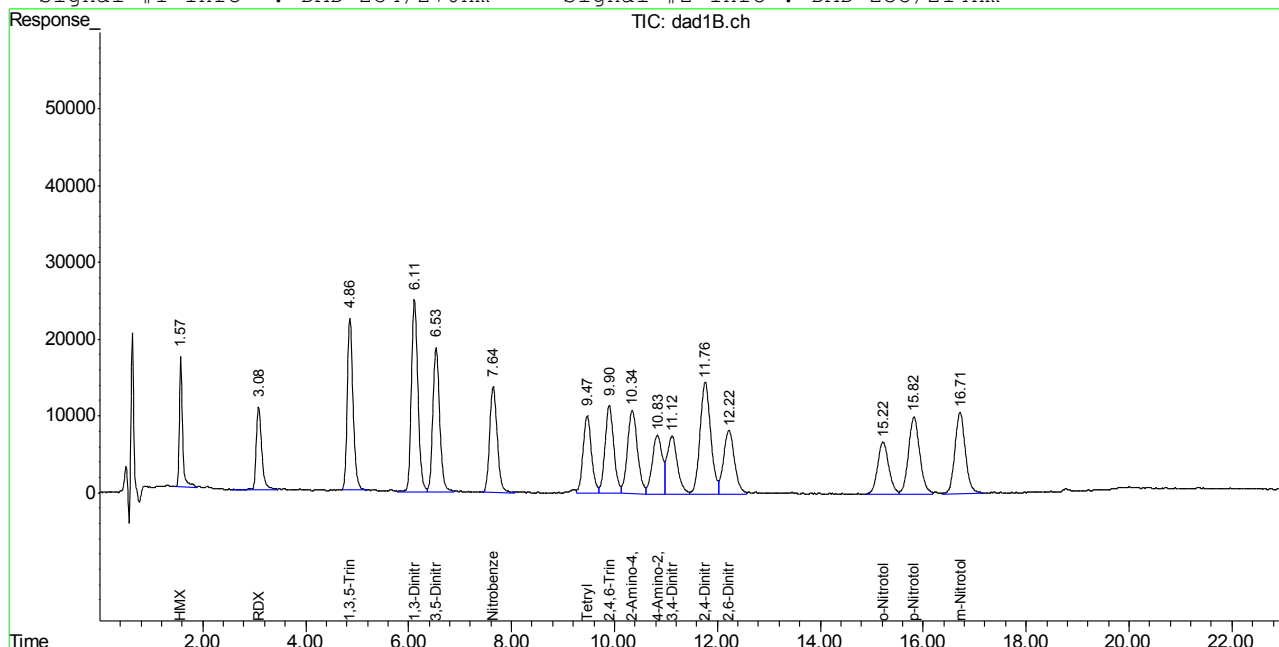
-----  
 (f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.  
 BB053981.D 8330B\_0324PLUS.M Fri Mar 31 10:49:27 2017

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0329BPL\BB053981.D\dad1B.ch Vial: 13  
Signal #2 : C:\HPCHEM\1\DATA\0329BPL\BB053981.D\dad1A.ch  
Acq On : 31-Mar-2017, 04:27:20 Operator: evitam  
Sample : OP64396-MSD Inst : G1315B  
Misc : op64396, gbb1567, 10.0,,, 50, 1, SOIL Multiplr: 1.00  
IntFile Signal #1: events.e IntFile Signal #2: events2.e  
Quant Time: Mar 31 10:12 2017 Quant Results File: 8330B 0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
Title : Explosives by 8330A,8330B,8332  
Last Update : Fri Mar 31 10:06:47 2017  
Response via : Multiple Level Calibration  
DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
Signal #1 Phase : Extend C-18      Signal #2 Phase: Extend C-18  
Signal #1 Info : DAD 254/270nm      Signal #2 Info : DAD 235/214nm



# Manual Integration Approval Summary

Page 1 of 1

**Sample Number:** OP64396-MSD  
**Lab FileID:** BB053981.D  
**Injection Time:** 03/31/17 04:27

**Method:** SW846 8330B  
**Analyst approved:** 04/03/17 07:30 (b) (6)  
**Supervisor approved:** 04/03/17 18:49 (b) (6)

Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3-Dinitrobenzene	99-65-0	2	6.11	Poorly defined baseline
3,5-Dinitroaniline	618-87-1	2	6.53	Poorly defined baseline
Nitrobenzene	98-95-3	2	7.64	Poorly defined baseline
Nitroglycerine	55-63-0	2	9.19	Poorly defined baseline
Tetryl	479-45-8	2	9.46	Poorly defined baseline
2,4,6-Trinitrotoluene	118-96-7	2	9.90	Poorly defined baseline
2-amino-4,6-Dinitrotoluene	35572-78-2	2	10.34	Poorly defined baseline
o-Nitrotoluene	88-72-2	2	15.22	Poorly defined baseline
m-Nitrotoluene	99-08-1	2	16.72	Poorly defined baseline
PETN	78-11-5	2	18.77	Poorly defined baseline

9.5.2.1

9

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0329BPL\BB053984.D\dad1B.ch Vial: 16  
 Signal #2 : C:\HPCHEM\1\DATA\0329BPL\BB053984.D\dad1A.ch  
 Acq On : 31-Mar-2017, 05:57:14 Operator: evitam  
 Sample : OP64396-DUP Inst : G1315B  
 Misc : op64396, gbb1567, 10.1,,,50,1,SOIL Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e  
 Quant Time: Mar 31 10:09:34 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
 Title : Explosives by 8330A,8330B,8332  
 Last Update : Fri Mar 31 10:06:47 2017  
 Response via : Initial Calibration  
 DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
 Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
 Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
-----						
System Monitoring Compounds						
15) S 3,4-Dinitrotolue	11.12	11.12	1038786	1770851	423.077	444.441
Spiked Amount	500.000	Range	69 - 134	Recovery	= 84.62%	88.89%
Target Compounds						
1) TNX	0.00	0.00	0	0	N.D. d	N.D. d
2) HMX	0.00	0.00	0	0	N.D. d	N.D. d
3) DNX	0.00	0.00	0	0	N.D. d	N.D. d
4) MNX	0.00	0.00	0	0	N.D. d	N.D. d
5) RDX	0.00	0.00	0	0	N.D. d	N.D. d
6) 1,3,5-Trinitrobe	0.00	0.00	0	0	N.D. d	N.D. d
7) 1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8) 3,5-Dinitroanili	0.00	0.00	0	0	N.D. d	N.D. d
9) Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
10) Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11) Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
12) 2,4,6-Trinitroto	0.00	0.00	0	0	N.D. d	N.D. d
13) 2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
14) 4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
16) 2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
17) 2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18) o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
19) p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20) m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
21) PETN	0.00	0.00	0	0	N.D. d	N.D. d

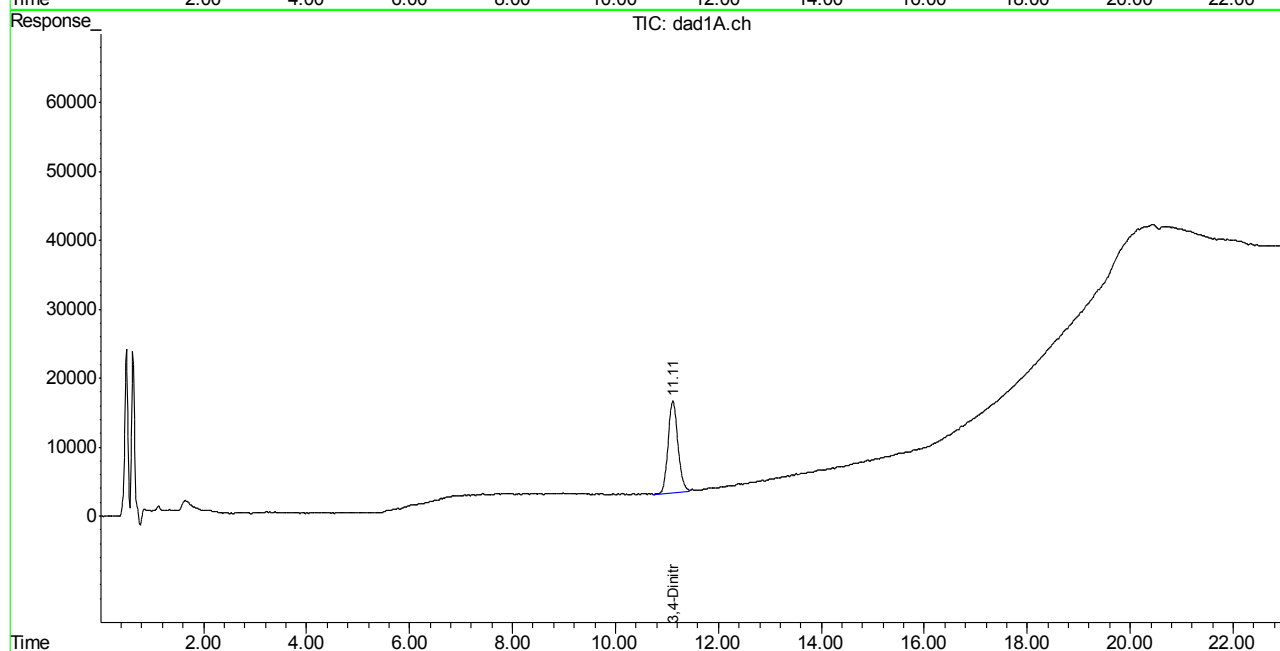
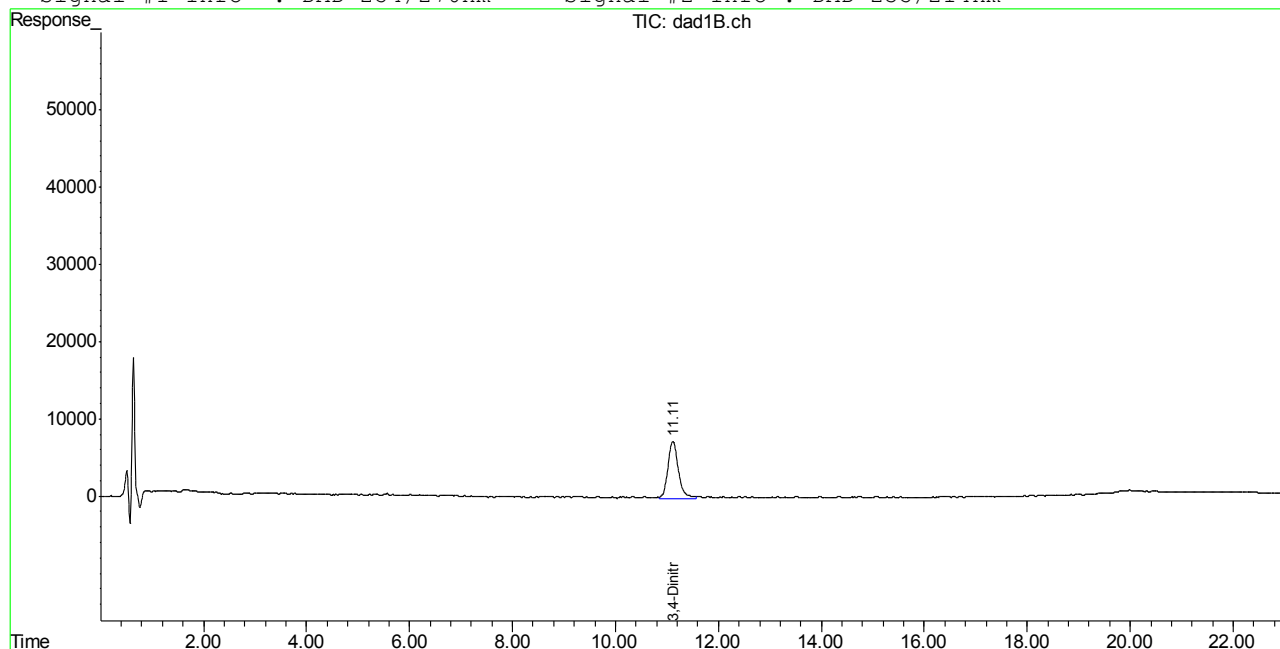
-----  
 (f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.  
 BB053984.D 8330B\_0324PLUS.M Fri Mar 31 10:49:30 2017

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0329BPL\BB053984.D\dad1B.ch Vial: 16  
Signal #2 : C:\HPCHEM\1\DATA\0329BPL\BB053984.D\dad1A.ch  
Acq On : 31-Mar-2017, 05:57:14 Operator: evitam  
Sample : OP64396-DUP Inst : G1315B  
Misc : op64396, gbb1567, 10.1,,,50,1,SOIL Multiplr: 1.00  
IntFile Signal #1: events.e IntFile Signal #2: events2.e  
Quant Time: Mar 31 10:13 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
Title : Explosives by 8330A,8330B,8332  
Last Update : Fri Mar 31 10:06:47 2017  
Response via : Multiple Level Calibration  
DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm



## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0329BPL\BB053985.D\dad1B.ch Vial: 17  
 Signal #2 : C:\HPCHEM\1\DATA\0329BPL\BB053985.D\dad1A.ch  
 Acq On : 31-Mar-2017, 06:27:13 Operator: evitam  
 Sample : OP64396-DUP2 Inst : G1315B  
 Misc : op64396, gbb1567, 10.1,,,50,1,SOIL Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e  
 Quant Time: Mar 31 10:09:35 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
 Title : Explosives by 8330A,8330B,8332  
 Last Update : Fri Mar 31 10:06:47 2017  
 Response via : Initial Calibration  
 DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
 Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
 Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
-----						
System Monitoring Compounds						
15) S 3,4-Dinitrotolue	11.12	11.12	1010927	1792532	411.731	449.798
Spiked Amount	500.000	Range	69 - 134	Recovery	=	82.35% 89.96%
Target Compounds						
1) TNX	0.00	0.00	0	0	N.D. d	N.D. d
2) HMX	0.00	0.00	0	0	N.D. d	N.D. d
3) DNX	0.00	0.00	0	0	N.D. d	N.D. d
4) MNX	0.00	0.00	0	0	N.D. d	N.D. d
5) RDX	0.00	0.00	0	0	N.D. d	N.D. d
6) 1,3,5-Trinitrobe	0.00	0.00	0	0	N.D. d	N.D. d
7) 1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8) 3,5-Dinitroanili	0.00	0.00	0	0	N.D. d	N.D. d
9) Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
10) Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11) Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
12) 2,4,6-Trinitroto	0.00	0.00	0	0	N.D. d	N.D. d
13) 2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
14) 4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
16) 2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
17) 2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18) o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
19) p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20) m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
21) PETN	0.00	0.00	0	0	N.D. d	N.D. d

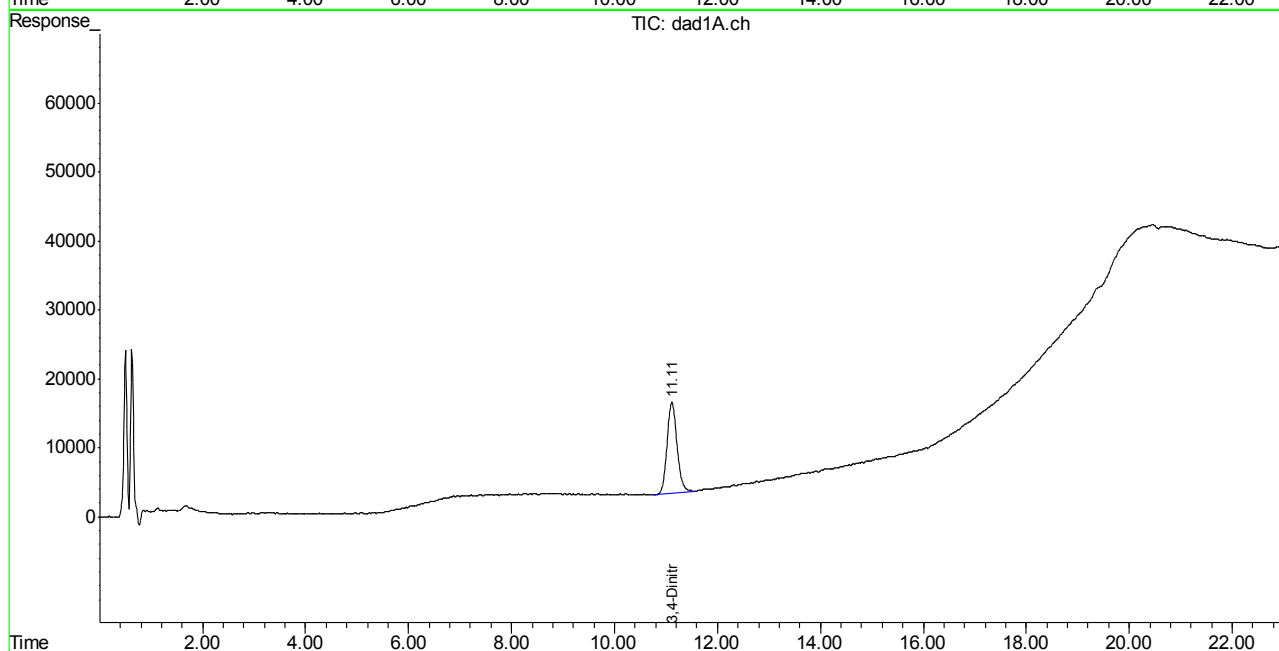
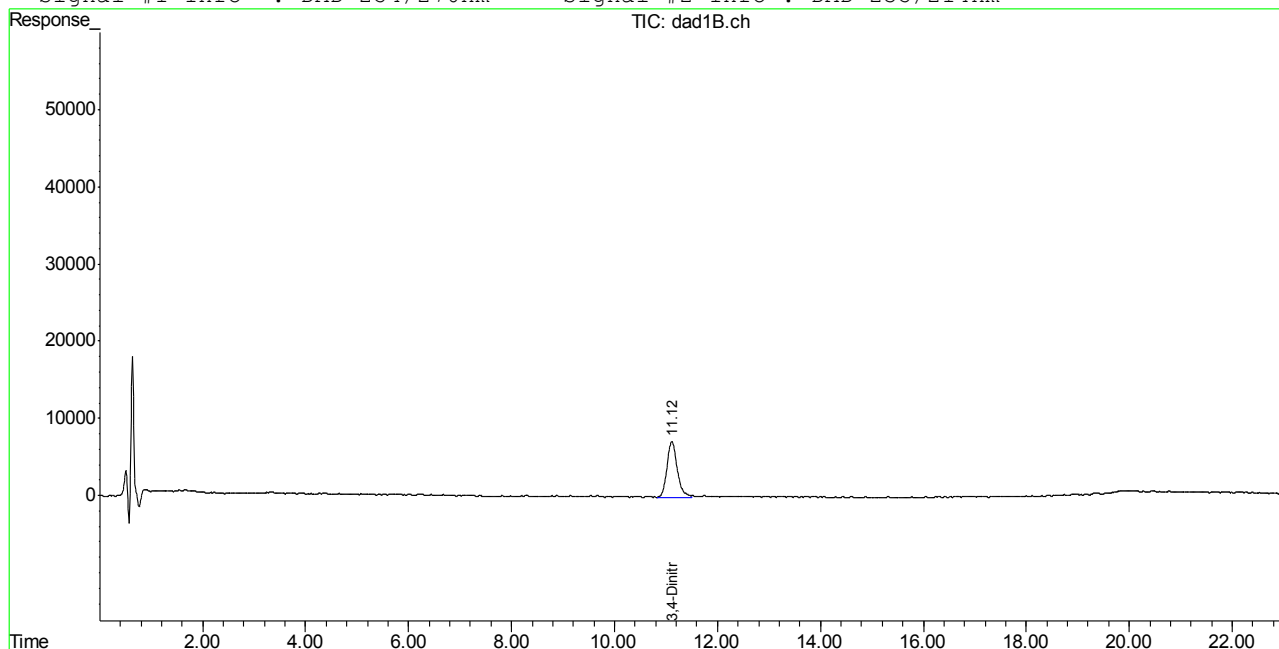
-----  
 (f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.  
 BB053985.D 8330B\_0324PLUS.M Fri Mar 31 10:49:31 2017

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0329BPL\BB053985.D\dad1B.ch Vial: 17  
Signal #2 : C:\HPCHEM\1\DATA\0329BPL\BB053985.D\dad1A.ch  
Acq On : 31-Mar-2017, 06:27:13 Operator: evitam  
Sample : OP64396-DUP2 Inst : G1315B  
Misc : op64396, gbb1567, 10.1,,,50,1,SOIL Multiplr: 1.00  
IntFile Signal #1: events.e IntFile Signal #2: events2.e  
Quant Time: Mar 31 10:13 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
Title : Explosives by 8330A, 8330B, 8332  
Last Update : Fri Mar 31 10:06:47 2017  
Response via : Multiple Level Calibration  
DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm



BB053985.D 8330B\_0324PLUS.M Fri Mar 31 10:49:31 2017

Page 2

(b) (6)  
03/29/17 14:53

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0324BPL\BB053780.D\dad1B.ch Vial: 42  
 Signal #2 : C:\HPCHEM\1\DATA\0324BPL\BB053780.D\dad1A.ch  
 Acq On : 24-Mar-2017, 11:59:24 Operator: evitam  
 Sample : ic1564-20 Inst : G1315B  
 Misc : op64214,gbbl564,10.0,,,50,1,soil Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e  
 Quant Time: Mar 27 09:56:12 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
 Title : Explosives by 8330A,8330B,8332  
 Last Update : Mon Mar 27 09:45:21 2017  
 Response via : Initial Calibration  
 DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
 Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
 Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
-----						
System Monitoring Compounds						
15) S 3,4-Dinitrotolue	11.24	11.29	47113	51020	21.988m	13.952m
Spiked Amount	500.000	Range	69 - 134	Recovery	=	4.40%# 2.79%#
Target Compounds						
1) TNX	1.46	1.46	59823	103868	19.327	21.435
2) HMX	1.60	1.60	39063	169879	24.287m	36.144m#
3) DNX	1.87	1.87	58971	106155	21.313m	21.256m
4) MNX	2.50	2.50	42859	69872	19.543m	20.368m
5) RDX	3.15	3.15	43723	65343	23.415	22.121m
6) 1,3,5-Trinitrobe	4.95	4.95	102641	192746	25.721m	24.135m
7) 1,3-Dinitrobenze	6.21	6.21	113335	81870	21.891	21.161m
8) 3,5-Dinitroanili	6.64	6.64	176569	307158	44.876m	46.377m
9) Nitrobenzene	7.72	7.72	68052	61932	21.226	20.856m
10) Nitroglycerin	0.00	9.33	0	129911	N.D. d	109.915m
11) Tetryl	9.63	9.61	30478	35527	14.806m	11.600m
12) 2,4,6-Trinitroto	10.06	10.08	33957	64038	10.952m	16.439 #
13) 2-Amino-4,6-Dini	10.51	10.52	64178	102007	19.688m	21.180
14) 4-Amino-2,6-Dini	10.94	11.01	42259	66650	18.643m	14.042
16) 2,4-Dinitrotolue	11.93	11.96	97362	55848	20.652m	18.380
17) 2,6-Dinitrotolue	12.35	12.38	69448	63745	25.763m	18.325
18) o-Nitrotoluene	15.35	15.52	59841	70405	26.677	23.967m
19) p-Nitrotoluene	15.94	16.18	76388	51761	22.767	19.880m
20) m-Nitrotoluene	16.80	16.85	79068	72953	23.577	18.615m
21) PETN	0.00	18.88	0	128514	N.D. d	98.729m

-----  
 (f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.  
 BB053780.D 8330B\_0324PLUS.M Tue Mar 28 08:28:43 2017

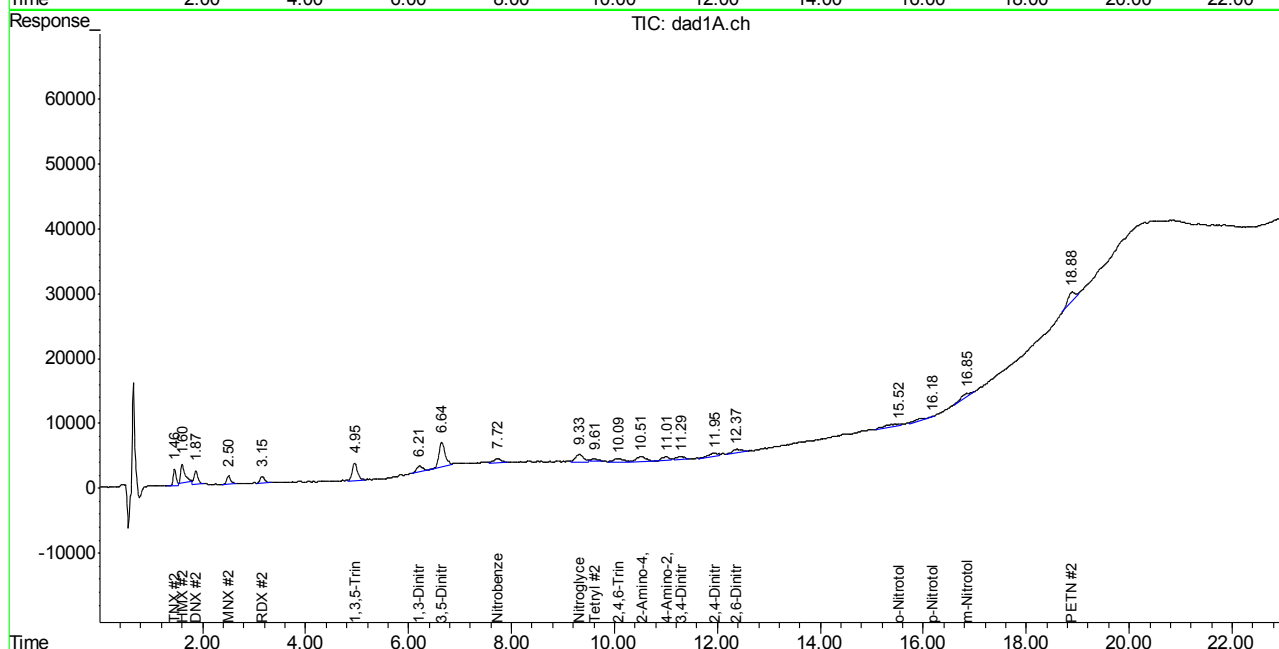
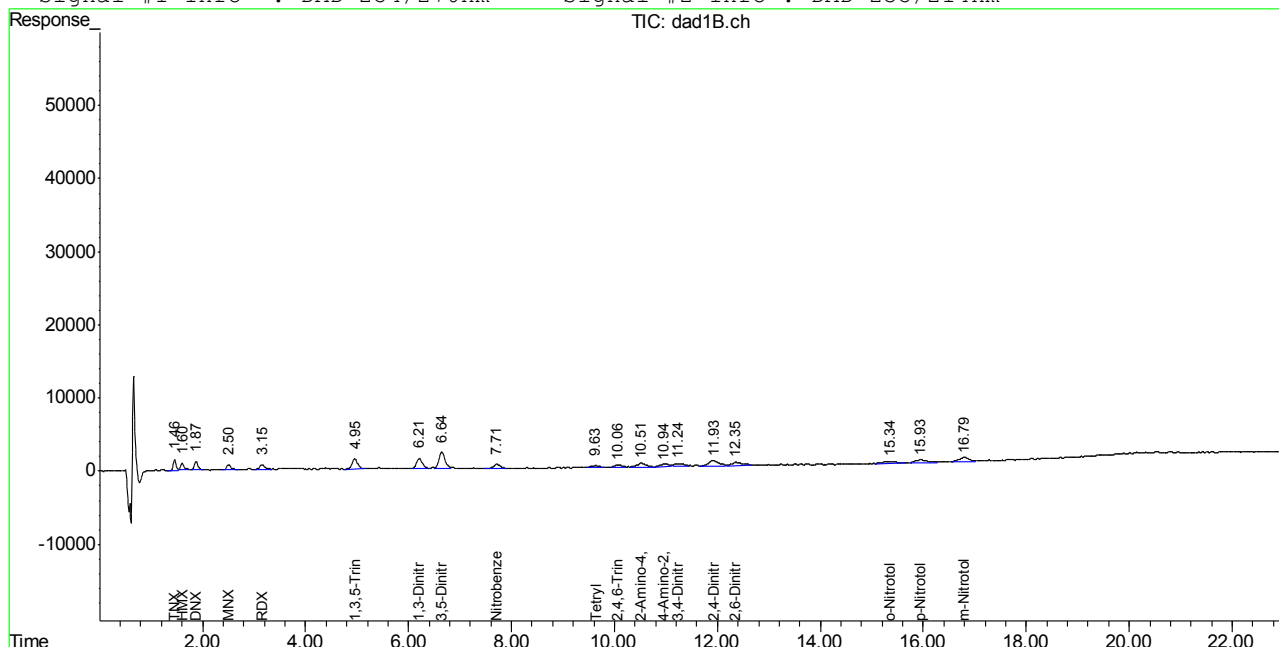


## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0324BPL\BB053780.D\dad1B.ch Vial: 42  
Signal #2 : C:\HPCHEM\1\DATA\0324BPL\BB053780.D\dad1A.ch  
Acq On : 24-Mar-2017, 11:59:24 Operator: evitam  
Sample : ic1564-20 Inst : G1315B  
Misc : op64214, gbb1564, 10.0, , , 50, 1, soil Multiplr: 1.00  
IntFile Signal #1: events.e IntFile Signal #2: events2.e  
Quant Time: Mar 27 9:59 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
Title : Explosives by 8330A, 8330B, 8332  
Last Update : Mon Mar 27 09:45:21 2017  
Response via : Multiple Level Calibration  
DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm



# Manual Integration Approval Summary

Page 1 of 1

**Sample Number:** GBB1564-IC1564      **Method:** SW846 8330B  
**Lab FileID:** BB053780.D      **Analyst approved:** 03/27/17 14:02 (b) (6)  
**Injection Time:** 03/24/17 11:59      **Supervisor approved:** 03/29/17 14:53 (b) (6)

Parameter	CAS	Sig#	R.T. (min.)	Reason
HMX	2691-41-0	1	1.60	Poorly defined baseline
HMX	2691-41-0	2	1.60	Poorly defined baseline
DNX		1	1.87	Poorly defined baseline
DNX		2	1.87	Poorly defined baseline
MNX		1	2.50	Poorly defined baseline
MNX		2	2.50	Poorly defined baseline
RDX	121-82-4	2	3.15	Poorly defined baseline
1,3,5-Trinitrobenzene	99-35-4	1	4.95	Poorly defined baseline
1,3,5-Trinitrobenzene	99-35-4	2	4.95	Poorly defined baseline
1,3-Dinitrobenzene	99-65-0	2	6.21	Poorly defined baseline
3,5-Dinitroaniline	618-87-1	1	6.64	Poorly defined baseline
3,5-Dinitroaniline	618-87-1	2	6.64	Poorly defined baseline
Nitrobenzene	98-95-3	2	7.72	Poorly defined baseline
Nitroglycerine	55-63-0	2	9.33	Poorly defined baseline
Tetryl	479-45-8	2	9.61	Poorly defined baseline
Tetryl	479-45-8	1	9.63	Poorly defined baseline
2,4,6-Trinitrotoluene	118-96-7	1	10.06	Poorly defined baseline
2-amino-4,6-Dinitrotoluene	35572-78-2	1	10.51	Poorly defined baseline
4-amino-2,6-Dinitrotoluene	19406-51-0	1	10.94	Poorly defined baseline
3,4-Dinitrotoluene	610-39-9	1	11.24	Poorly defined baseline
3,4-Dinitrotoluene	610-39-9	2	11.29	Poorly defined baseline
2,4-Dinitrotoluene	121-14-2	1	11.93	Poorly defined baseline
2,6-Dinitrotoluene	606-20-2	1	12.35	Poorly defined baseline
o-Nitrotoluene	88-72-2	2	15.52	Poorly defined baseline
p-Nitrotoluene	99-99-0	2	16.18	Poorly defined baseline
m-Nitrotoluene	99-08-1	2	16.85	Poorly defined baseline
PETN	78-11-5	2	18.88	Poorly defined baseline

9.7.1.1  
9

(b) (6)  
03/29/17 14:53

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0324BPL\BB053781.D\dad1B.ch Vial: 43  
 Signal #2 : C:\HPCHEM\1\DATA\0324BPL\BB053781.D\dad1A.ch  
 Acq On : 24-Mar-2017, 12:29:21 Operator: evitam  
 Sample : ic1564-50 Inst : G1315B  
 Misc : op64214,gbbl564,10.0,,,50,1,soil Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e  
 Quant Time: Mar 27 09:56:13 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
 Title : Explosives by 8330A,8330B,8332  
 Last Update : Mon Mar 27 09:45:21 2017  
 Response via : Initial Calibration  
 DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
 Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
 Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
-----						
System Monitoring Compounds						
15) S 3,4-Dinitrotolue	11.27	11.27	136819	161025	63.696	43.918m
Spiked Amount	500.000	Range	69 - 134	Recovery	=	12.74%# 8.78%#
Target Compounds						
1) TNX	1.46	1.46	158579	253102	51.232	52.096
2) HMX	1.60	1.59	97234	262990	60.453	55.937m
3) DNX	1.87	1.87	149668	228538	54.092	45.762m
4) MNX	2.50	2.49	105801	174082	48.145	50.637m
5) RDX	3.15	3.15	106422	161439	56.991	54.652
6) 1,3,5-Trinitroben	4.95	4.95	246858	478694	61.861	59.801
7) 1,3-Dinitrobenze	6.20	6.20	295398	187235	57.057	48.395m
8) 3,5-Dinitroanili	6.64	6.64	257621	390330	65.475	58.935m
9) Nitrobenzene	7.72	7.72	181748	142793	56.624	47.993m
10) Nitroglycerin	0.00	9.33	0	313987	N.D. d	265.244m
11) Tetryl	9.64	9.63	77233	118802	37.519	38.791m
12) 2,4,6-Trinitroto	10.06	10.06	120291	165083	38.798	42.378m
13) 2-Amino-4,6-Dini	10.53	10.53	184455	233619	56.587	48.400m
14) 4-Amino-2,6-Dini	11.01	11.01	135491	196594	59.773	41.327m
16) 2,4-Dinitrotolue	11.94	11.92	285284	150836	60.368	49.642m
17) 2,6-Dinitrotolue	12.37	12.39	161211	176014	59.691	50.599
18) o-Nitrotoluene	15.34	15.34	119223	162625	53.090	55.260m
19) p-Nitrotoluene	15.94	15.98	166672	119601	49.596	45.816m
20) m-Nitrotoluene	16.81	16.86	182954	154203	54.554	39.347m
21) PETN	0.00	18.88	0	302674	N.D. d	231.982m

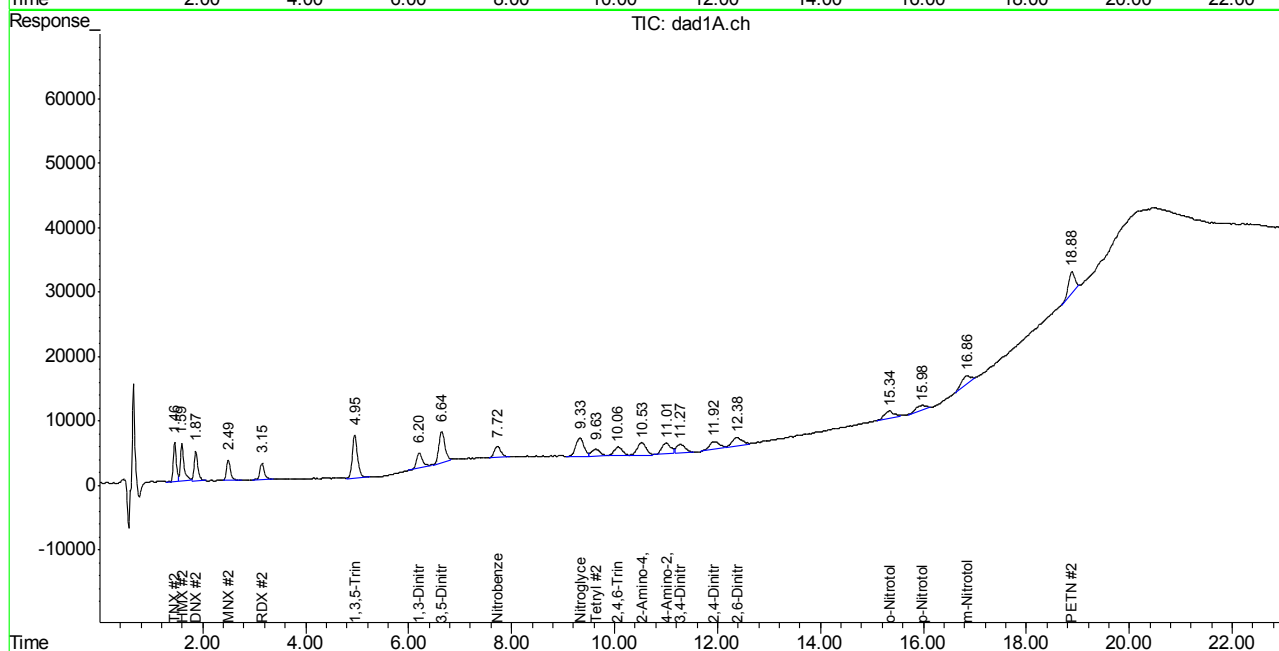
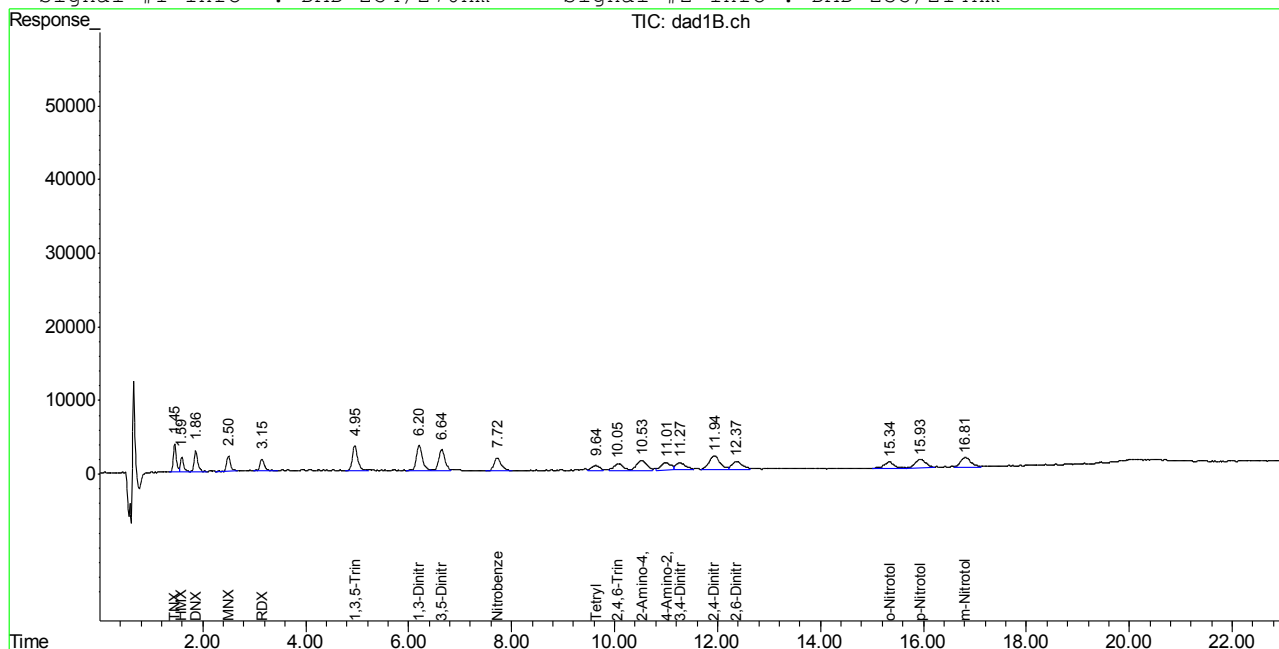
-----  
 (f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.  
 BB053781.D 8330B\_0324PLUS.M Tue Mar 28 08:28:44 2017

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0324BPL\BB053781.D\dad1B.ch Vial: 43  
Signal #2 : C:\HPCHEM\1\DATA\0324BPL\BB053781.D\dad1A.ch  
Acq On : 24-Mar-2017, 12:29:21 Operator: evitam  
Sample : ic1564-50 Inst : G1315B  
Misc : op64214, gbb1564, 10.0, , , 50, 1, soil Multiplr: 1.00  
IntFile Signal #1: events.e IntFile Signal #2: events2.e  
Quant Time: Mar 27 10:19 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
Title : Explosives by 8330A, 8330B, 8332  
Last Update : Mon Mar 27 09:45:21 2017  
Response via : Multiple Level Calibration  
DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm



# Manual Integration Approval Summary

Page 1 of 1

**Sample Number:** GBB1564-IC1564

**Method:** SW846 8330B

**Lab FileID:** BB053781.D

**Analyst approved:** 03/27/17 14:02 (b) (6)

**Injection Time:** 03/24/17 12:29

**Supervisor approved:** 03/29/17 14:53 (b) (6)

Parameter	CAS	Sig#	R.T. (min.)	Reason
HMX	2691-41-0	2	1.59	Poorly defined baseline
DNX		2	1.87	Poorly defined baseline
MNX		2	2.49	Poorly defined baseline
1,3-Dinitrobenzene	99-65-0	2	6.20	Poorly defined baseline
3,5-Dinitroaniline	618-87-1	2	6.64	Poorly defined baseline
Nitrobenzene	98-95-3	2	7.72	Poorly defined baseline
Nitroglycerine	55-63-0	2	9.33	Poorly defined baseline
Tetryl	479-45-8	2	9.63	Poorly defined baseline
2,4,6-Trinitrotoluene	118-96-7	2	10.06	Poorly defined baseline
2-amino-4,6-Dinitrotoluene	35572-78-2	2	10.53	Poorly defined baseline
4-amino-2,6-Dinitrotoluene	19406-51-0	2	11.01	Poorly defined baseline
3,4-Dinitrotoluene	610-39-9	2	11.27	Poorly defined baseline
2,4-Dinitrotoluene	121-14-2	2	11.92	Poorly defined baseline
o-Nitrotoluene	88-72-2	2	15.34	Poorly defined baseline
p-Nitrotoluene	99-99-0	2	15.98	Poorly defined baseline
m-Nitrotoluene	99-08-1	2	16.86	Poorly defined baseline
PETN	78-11-5	2	18.88	Poorly defined baseline

9.7.2.1  
9

(b) (6)  
03/29/17 14:53

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0324BPL\BB053782.D\dad1B.ch Vial: 44  
 Signal #2 : C:\HPCHEM\1\DATA\0324BPL\BB053782.D\dad1A.ch  
 Acq On : 24-Mar-2017, 12:59:18 Operator: evitam  
 Sample : ic1564-100 Inst : G1315B  
 Misc : op64214,gbbl564,10.0,,,50,1,soil Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e  
 Quant Time: Mar 27 09:56:14 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
 Title : Explosives by 8330A,8330B,8332  
 Last Update : Mon Mar 27 09:45:21 2017  
 Response via : Initial Calibration  
 DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
 Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
 Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
-----						
System Monitoring Compounds						
15) S 3,4-Dinitrotolue	11.28	11.28	263419	367232	122.210	99.676
Spiked Amount	500.000	Range	69 - 134	Recovery	=	24.44%# 19.94%#
Target Compounds						
1) TNX	1.46	1.46	328812	520909	106.228	106.721
2) HMX	1.60	1.60	188577	557786	117.243	118.514
3) DNX	1.87	1.87	305131	496104	110.279	99.338
4) MNX	2.50	2.50	236485	376079	107.166	108.946
5) RDX	3.15	3.15	209651	331356	112.273	112.175
6) 1,3,5-Trinitrobe	4.96	4.96	509119	978883	127.582	121.796
7) 1,3-Dinitrobenze	6.21	6.21	590118	382556	113.982	98.881m
8) 3,5-Dinitroanili	6.65	6.64	475674	777182	120.895	117.345m
9) Nitrobenzene	7.73	7.73	355438	325719	110.541	108.997m
10) Nitroglycerin	0.00	9.33	0	649863	N.D. d	547.424
11) Tetryl	9.64	9.64	176001	234282	85.499	76.497
12) 2,4,6-Trinitroto	10.09	10.08	239852	301023	77.361	77.275
13) 2-Amino-4,6-Dini	10.53	10.53	356783	468692	109.454	96.728
14) 4-Amino-2,6-Dini	11.02	11.02	271060	451175	119.579	94.431
16) 2,4-Dinitrotolue	11.94	11.95	541905	322069	114.295	105.998m
17) 2,6-Dinitrotolue	12.40	12.40	314342	369648	116.024	106.264m
18) o-Nitrotoluene	15.35	15.35	243033	319988	107.972	108.402m
19) p-Nitrotoluene	15.96	15.96	365065	252884	108.248	96.384m
20) m-Nitrotoluene	16.83	16.84	375195	410204	111.876	104.668m
21) PETN	0.00	18.89	0	644907	N.D. d	492.049m

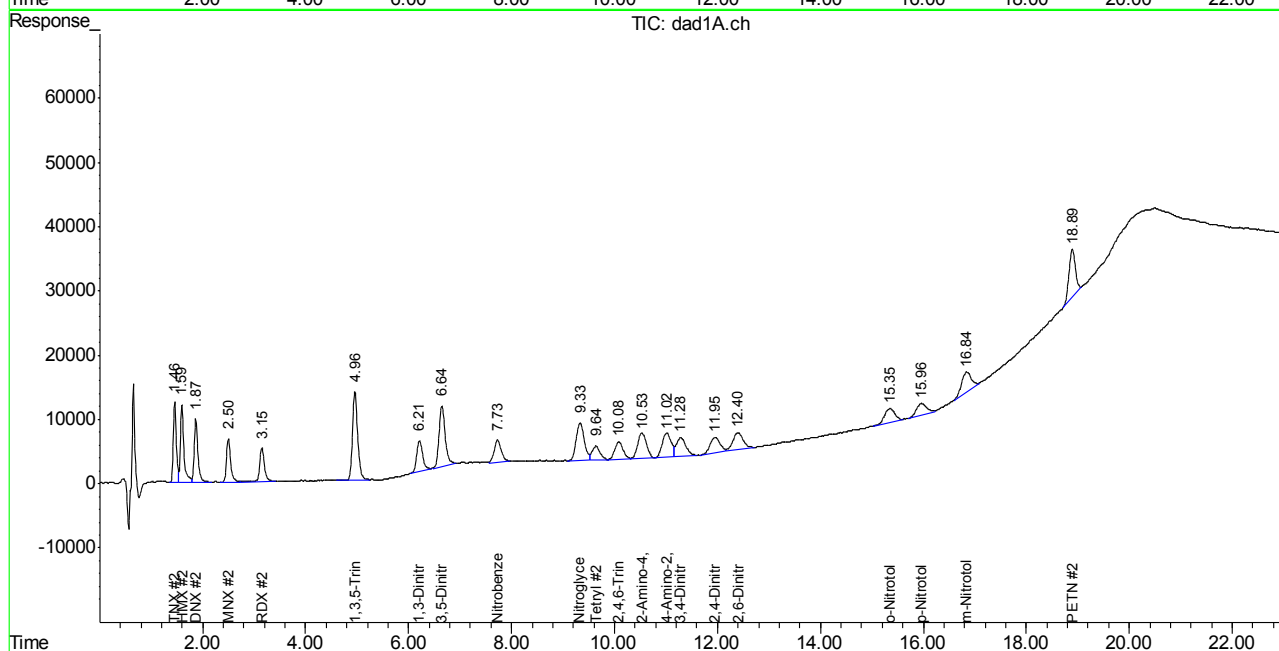
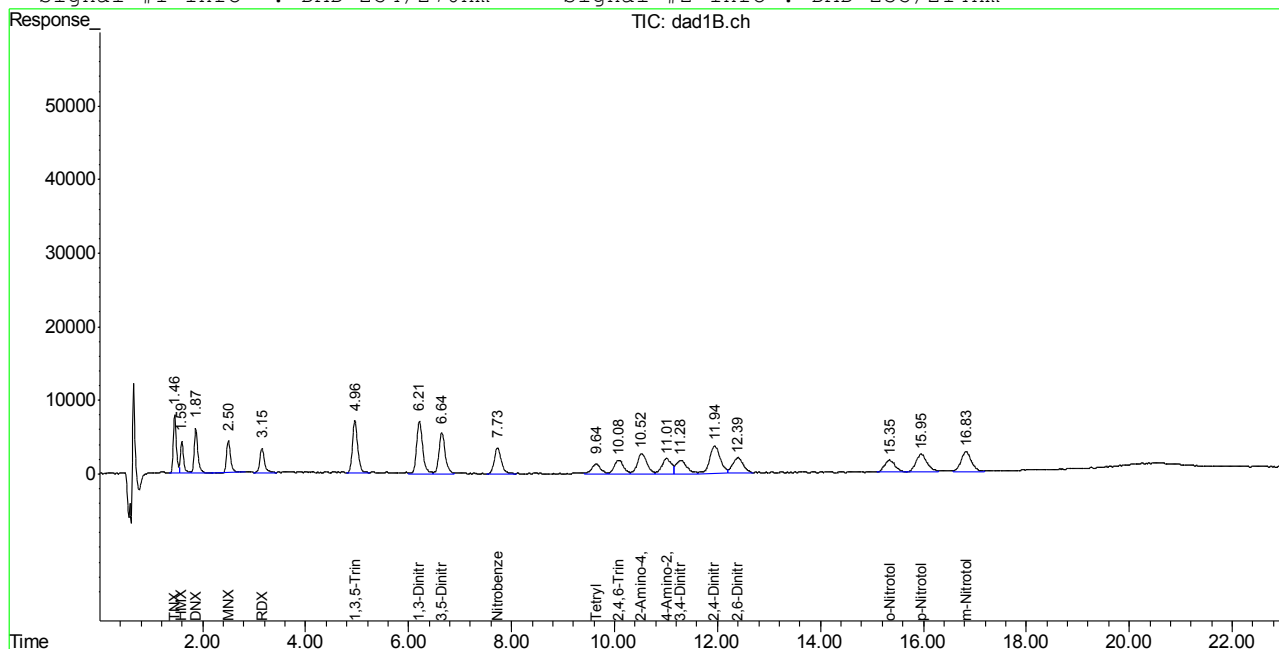
-----  
 (f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.  
 BB053782.D 8330B\_0324PLUS.M Tue Mar 28 08:28:45 2017

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0324BPL\BB053782.D\dad1B.ch Vial: 44  
Signal #2 : C:\HPCHEM\1\DATA\0324BPL\BB053782.D\dad1A.ch  
Acq On : 24-Mar-2017, 12:59:18 Operator: evitam  
Sample : ic1564-100 Inst : G1315B  
Misc : op64214, gbb1564, 10.0, , , 50, 1, soil Multiplr: 1.00  
IntFile Signal #1: events.e IntFile Signal #2: events2.e  
Quant Time: Mar 27 10:01 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
Title : Explosives by 8330A, 8330B, 8332  
Last Update : Mon Mar 27 09:45:21 2017  
Response via : Multiple Level Calibration  
DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm



# Manual Integration Approval Summary

Page 1 of 1

**Sample Number:** GBB1564-IC1564

**Method:** SW846 8330B

**Lab FileID:** BB053782.D

**Analyst approved:** 03/27/17 14:02 (b) (6)

**Injection Time:** 03/24/17 12:59

**Supervisor approved:** 03/29/17 14:53 (b) (6)

Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3-Dinitrobenzene	99-65-0	2	6.21	Poorly defined baseline
3,5-Dinitroaniline	618-87-1	2	6.64	Poorly defined baseline
Nitrobenzene	98-95-3	2	7.73	Poorly defined baseline
2,4-Dinitrotoluene	121-14-2	2	11.95	Poorly defined baseline
2,6-Dinitrotoluene	606-20-2	2	12.40	Poorly defined baseline
o-Nitrotoluene	88-72-2	2	15.35	Poorly defined baseline
p-Nitrotoluene	99-99-0	2	15.96	Poorly defined baseline
m-Nitrotoluene	99-08-1	2	16.84	Poorly defined baseline
PETN	78-11-5	2	18.89	Poorly defined baseline

9.7.3.1

9



(b) (6)  
03/29/17 14:53

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0324BPL\BB053783.D\dad1B.ch Vial: 45  
 Signal #2 : C:\HPCHEM\1\DATA\0324BPL\BB053783.D\dad1A.ch  
 Acq On : 24-Mar-2017, 13:29:17 Operator: evitam  
 Sample : ic1564-200 Inst : G1315B  
 Misc : op64214,gbbl564,10.0,,,50,1,soil Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e  
 Quant Time: Mar 27 09:56:15 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
 Title : Explosives by 8330A,8330B,8332  
 Last Update : Mon Mar 27 09:45:21 2017  
 Response via : Initial Calibration  
 DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
 Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
 Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
-----						
System Monitoring Compounds						
15) S 3,4-Dinitrotolue	11.31	11.31	499241	807799	230.145	217.048
Spiked Amount	500.000	Range	69 - 134	Recovery	=	46.03%# 43.41%#
Target Compounds						
1) TNX	1.46	1.46	677075	1052781	218.740	213.748
2) HMX	1.60	1.60	391422	1120126	243.357	237.522
3) DNX	1.87	1.87	605448	987329	218.818	197.700
4) MNX	2.50	2.50	465031	744874	209.228	214.197
5) RDX	3.16	3.16	391061	641347	209.421	217.117
6) 1,3,5-Trinitrobe	4.96	4.96	1047443	2005531	262.483	247.521
7) 1,3-Dinitrobenze	6.22	6.21	1157663	802386	223.604	207.395m
8) 3,5-Dinitroanili	6.65	6.65	929552	1551407	236.249	234.244m
9) Nitrobenzene	7.74	7.73	686514	660511	212.793	219.306m
10) Nitroglycerin	0.00	9.34	0	1341942	N.D. d	1123.913m
11) Tetryl	9.66	9.65	330539	523600	160.573	170.964m
12) 2,4,6-Trinitroto	10.09	10.10	472269	721235	152.323	185.146
13) 2-Amino-4,6-Dini	10.54	10.55	727060	1066444	223.048	217.984
14) 4-Amino-2,6-Dini	11.03	11.03	516341	980498	227.786	203.406
16) 2,4-Dinitrotolue	11.96	11.96	1048539	667074	219.744	219.544
17) 2,6-Dinitrotolue	12.41	12.41	614934	774023	225.598	222.511
18) o-Nitrotoluene	15.35	15.36	479918	673516	212.279	226.634m
19) p-Nitrotoluene	15.98	15.98	747473	547842	220.156	206.531m
20) m-Nitrotoluene	16.85	16.85	740741	794710	220.876	202.779m
21) PETN	0.00	18.90	0	1366757	N.D. d	1033.090m

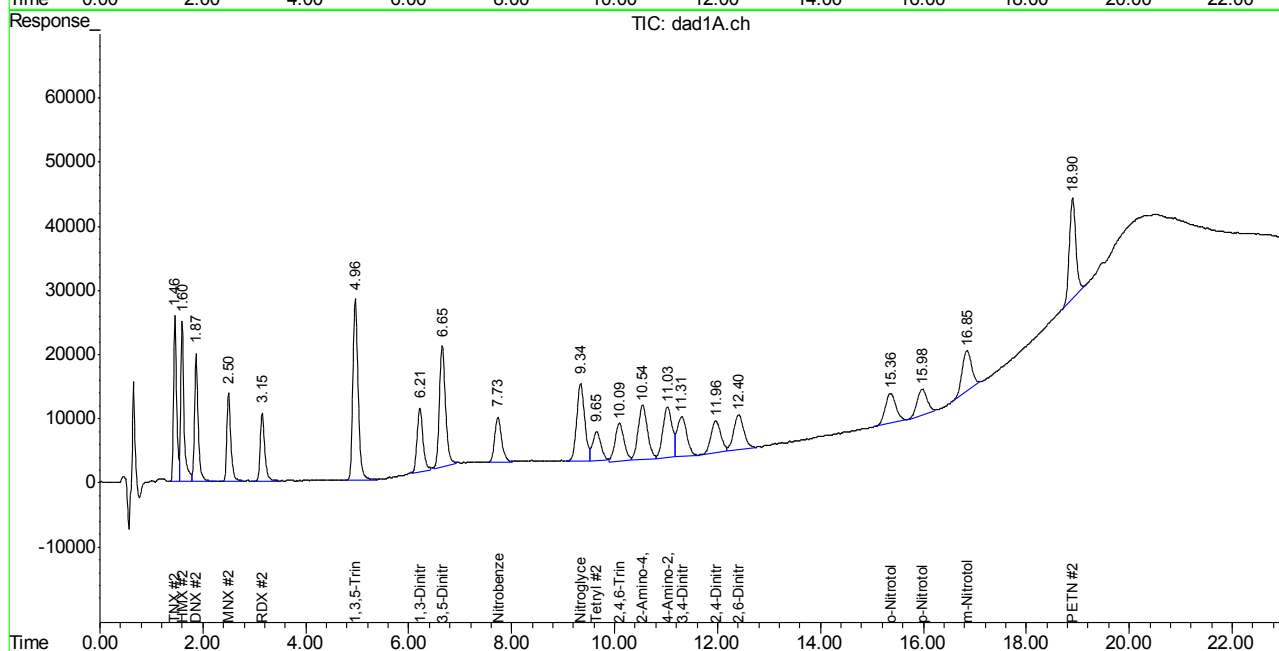
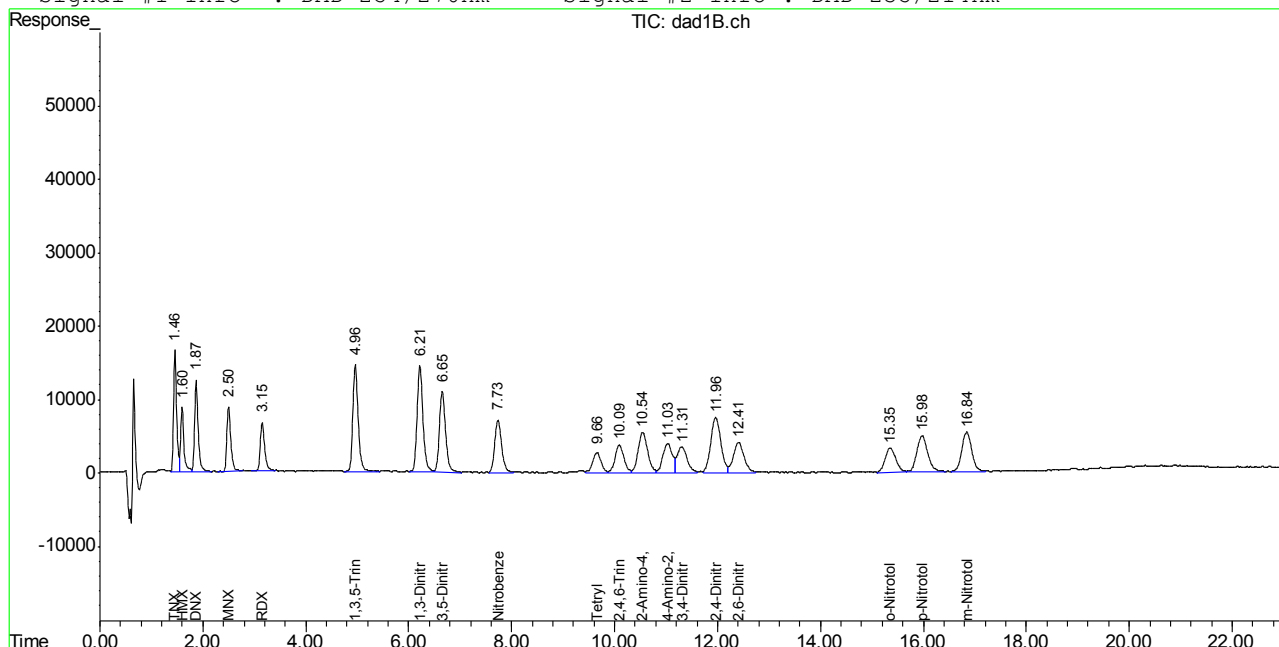
-----  
 (f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.  
 BB053783.D 8330B\_0324PLUS.M Tue Mar 28 08:28:46 2017

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0324BPL\BB053783.D\dad1B.ch Vial: 45  
Signal #2 : C:\HPCHEM\1\DATA\0324BPL\BB053783.D\dad1A.ch  
Acq On : 24-Mar-2017, 13:29:17 Operator: evitam  
Sample : ic1564-200 Inst : G1315B  
Misc : op64214, gbb1564, 10.0,,,50,1,soil Multiplr: 1.00  
IntFile Signal #1: events.e IntFile Signal #2: events2.e  
Quant Time: Mar 28 8:23 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
Title : Explosives by 8330A,8330B,8332  
Last Update : Mon Mar 27 09:45:21 2017  
Response via : Multiple Level Calibration  
DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm



# Manual Integration Approval Summary

Page 1 of 1

**Sample Number:** GBB1564-IC1564

**Method:** SW846 8330B

**Lab FileID:** BB053783.D

**Analyst approved:** 03/27/17 14:02 (b) (6)

**Injection Time:** 03/24/17 13:29

**Supervisor approved:** 03/29/17 14:53 (b) (6)

Parameter	CAS	Sig#	R. T. (min.)	Reason
1,3-Dinitrobenzene	99-65-0	2	6.21	Poorly defined baseline
3,5-Dinitroaniline	618-87-1	2	6.65	Poorly defined baseline
Nitrobenzene	98-95-3	2	7.73	Poorly defined baseline
Nitroglycerine	55-63-0	2	9.34	Poorly defined baseline
Tetryl	479-45-8	2	9.65	Poorly defined baseline
o-Nitrotoluene	88-72-2	2	15.36	Poorly defined baseline
p-Nitrotoluene	99-99-0	2	15.98	Poorly defined baseline
m-Nitrotoluene	99-08-1	2	16.85	Poorly defined baseline
PETN	78-11-5	2	18.90	Poorly defined baseline

9.7.4.1

9

(b) (6)  
03/29/17 14:53

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0324BPL\BB053784.D\dad1B.ch Vial: 46  
 Signal #2 : C:\HPCHEM\1\DATA\0324BPL\BB053784.D\dad1A.ch  
 Acq On : 24-Mar-2017, 13:59:14 Operator: evitam  
 Sample : icc1564-500 Inst : G1315B  
 Misc : op64214, gbb1564, 10.0,,,50,1,soil Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e  
 Quant Time: Mar 27 09:56:16 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
 Title : Explosives by 8330A,8330B,8332  
 Last Update : Mon Mar 27 09:45:21 2017  
 Response via : Initial Calibration  
 DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
 Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
 Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
-----						
System Monitoring Compounds						
15) S 3,4-Dinitrotolue	11.32	11.32	1154243	1996008	523.076	522.607
Spiked Amount	500.000	Range	69 - 134	Recovery	= 104.62%	104.52%
Target Compounds						
1) TNX	1.46	1.46	1626946	2534126	525.611	502.321
2) HMX	1.60	1.60	874931	2405296	543.967	507.744
3) DNx	1.87	1.87	1411886	2275106	510.276	455.560
4) MNX	2.50	2.50	1161300	1808219	511.661	509.475
5) RDX	3.16	3.16	944575	1532250	505.840	518.716
6) 1,3,5-Trinitrobe	4.97	4.97	2442008	4756346	611.953	574.940
7) 1,3-Dinitrobenze	6.22	6.22	2719230	1827427	525.223	472.341m
8) 3,5-Dinitroanili	6.66	6.66	2111569	3607352	536.664	544.668m
9) Nitrobenzene	7.74	7.74	1633896	1537837	501.710	500.635m
10) Nitroglycerin	0.00	9.35	0	3069839	N.D. d	2535.401m
11) Tetryl	9.67	9.66	761976	1142793	370.160	373.140m
12) 2,4,6-Trinitroto	10.11	10.11	1089528	1666780	351.412	427.874
13) 2-Amino-4,6-Dini	10.56	10.56	1688830	2547402	518.100	509.001
14) 4-Amino-2,6-Dini	11.04	11.04	1200766	2431158	529.723	492.785
16) 2,4-Dinitrotolue	11.98	11.98	2443280	1612378	503.429	530.658
17) 2,6-Dinitrotolue	12.42	12.43	1411632	1800568	509.859	517.616
18) o-Nitrotoluene	15.38	15.38	1151101	1549965	503.022	513.200
19) p-Nitrotoluene	15.99	15.99	1762554	1374262	510.286	503.317
20) m-Nitrotoluene	16.86	16.86	1736939	2056797	517.924	524.813m
21) PETN	0.00	18.91	0	3310289	N.D. d	2442.847m

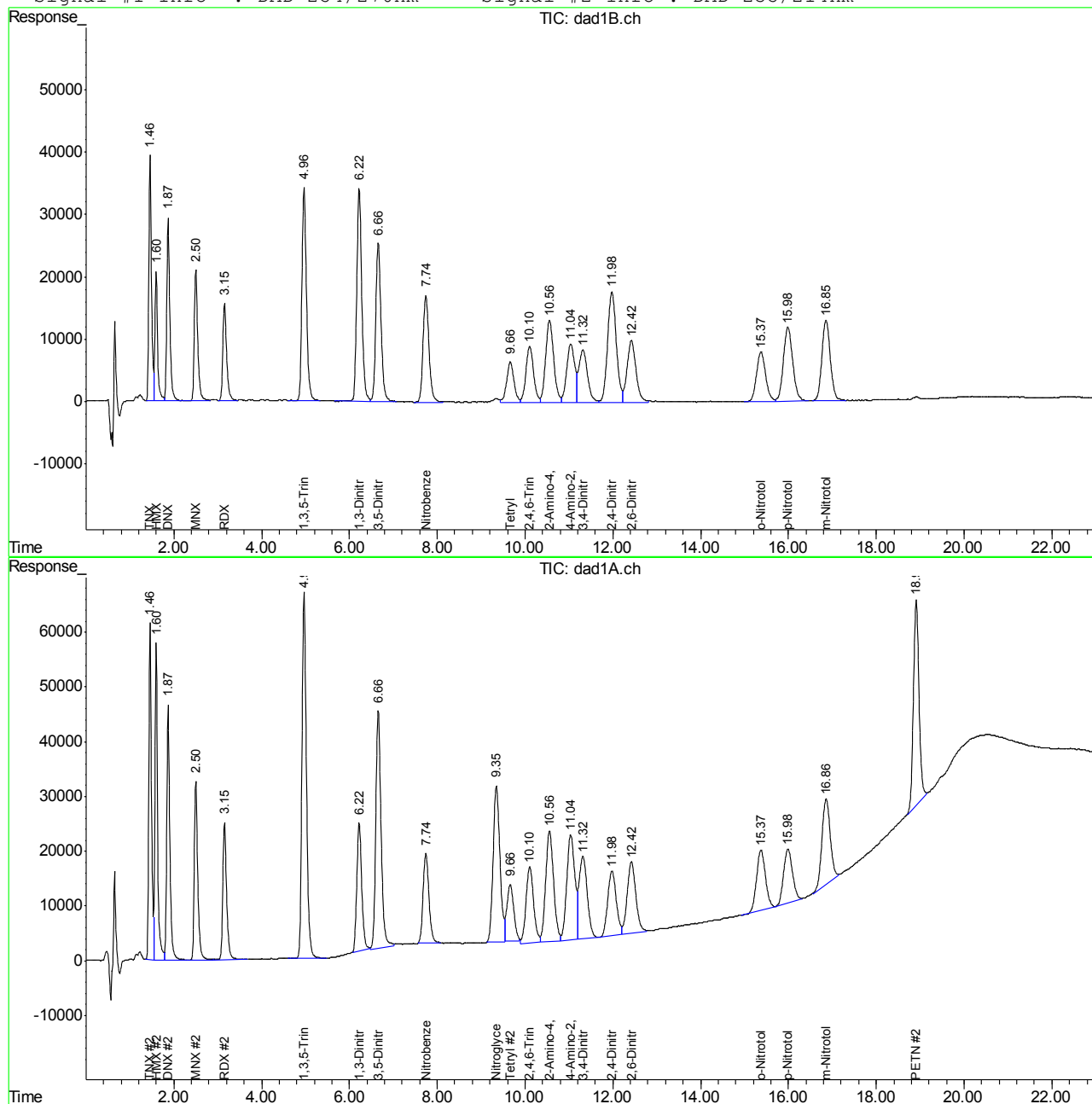
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 (f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.  
 BB053784.D 8330B\_0324PLUS.M Tue Mar 28 08:28:47 2017

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0324BPL\BB053784.D\dad1B.ch Vial: 46  
Signal #2 : C:\HPCHEM\1\DATA\0324BPL\BB053784.D\dad1A.ch  
Acq On : 24-Mar-2017, 13:59:14 Operator: evitam  
Sample : icc1564-500 Inst : G1315B  
Misc : op64214, gbb1564, 10.0,,,50,1,soil Multiplr: 1.00  
IntFile Signal #1: events.e IntFile Signal #2: events2.e  
Quant Time: Mar 28 8:24 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
Title : Explosives by 8330A, 8330B, 8332  
Last Update : Mon Mar 27 09:45:21 2017  
Response via : Multiple Level Calibration  
DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm



# Manual Integration Approval Summary

Page 1 of 1

**Sample Number:** GBB1564-ICC1564

**Method:** SW846 8330B

**Lab FileID:** BB053784.D

**Analyst approved:** 03/27/17 14:02 (b) (6)

**Injection Time:** 03/24/17 13:59

**Supervisor approved:** 03/29/17 14:53 (b) (6)

Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3-Dinitrobenzene	99-65-0	2	6.22	Poorly defined baseline
3,5-Dinitroaniline	618-87-1	2	6.66	Poorly defined baseline
Nitrobenzene	98-95-3	2	7.74	Poorly defined baseline
Nitroglycerine	55-63-0	2	9.35	Poorly defined baseline
Tetryl	479-45-8	2	9.66	Poorly defined baseline
m-Nitrotoluene	99-08-1	2	16.86	Poorly defined baseline
PETN	78-11-5	2	18.91	Poorly defined baseline

9.7.5.1

9

(b) (6)  
03/29/17 14:53

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0324BPL\BB053785.D\dad1B.ch Vial: 47  
 Signal #2 : C:\HPCHEM\1\DATA\0324BPL\BB053785.D\dad1A.ch  
 Acq On : 24-Mar-2017, 14:29:10 Operator: evitam  
 Sample : ic1564-1000 Inst : G1315B  
 Misc : op64214, gbb1564, 10.0,,,50,1,soil Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e  
 Quant Time: Mar 27 09:56:17 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
 Title : Explosives by 8330A,8330B,8332  
 Last Update : Mon Mar 27 09:45:21 2017  
 Response via : Initial Calibration  
 DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
 Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
 Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
-----						
System Monitoring Compounds						
15) S 3,4-Dinitrotolue	11.32	11.32	2316166	4064380	1020.282	1021.544
Spiked Amount	500.000	Range	69 - 134	Recovery	=	204.06%# 204.31%#
Target Compounds						
1) TNX	1.46	1.46	3354684	5212626	1083.784	993.238
2) HMX	1.60	1.60	1746265	4789459	1085.697	1002.755
3) DNX	1.87	1.87	2841528	4551261	1026.968	911.330
4) MNX	2.50	2.50	2325659	3641035	992.002	993.041
5) RDX	3.16	3.16	1906779	3067269	1021.120	1038.369
6) 1,3,5-Trinitrobe	4.97	4.97	4950265	9693483	1240.507	1132.077
7) 1,3-Dinitrobenze	6.22	6.22	5514344	3734001	1065.103	965.140m
8) 3,5-Dinitroanili	6.66	6.65	4246466	7115578	1079.257	1074.370m
9) Nitrobenzene	7.74	7.74	3339327	3166036	1008.831	996.415m
10) Nitroglycerin	0.00	9.34	0	6201866	N.D. d	5000.956m
11) Tetryl	9.66	9.66	1541500	2407797	748.845	786.185m
12) 2,4,6-Trinitroto	10.11	10.11	2200652	3201264	709.789	821.786m
13) 2-Amino-4,6-Dini	10.56	10.55	3445367	5055536	1056.972	975.079m
14) 4-Amino-2,6-Dini	11.04	11.04	2462712	4809071	1086.435	941.328m
16) 2,4-Dinitrotolue	11.98	11.98	4976816	3265044	996.336	1074.575
17) 2,6-Dinitrotolue	12.43	12.43	2851836	3676910	1003.087	1057.015
18) o-Nitrotoluene	15.38	15.37	2365677	3237083	1012.403	1041.091m
19) p-Nitrotoluene	15.99	15.99	3638552	2895785	1022.639	1011.242
20) m-Nitrotoluene	16.86	16.86	3561822	4244803	1062.071	1083.105m
21) PETN	0.00	18.91	0	6687661	N.D. d	4750.863m

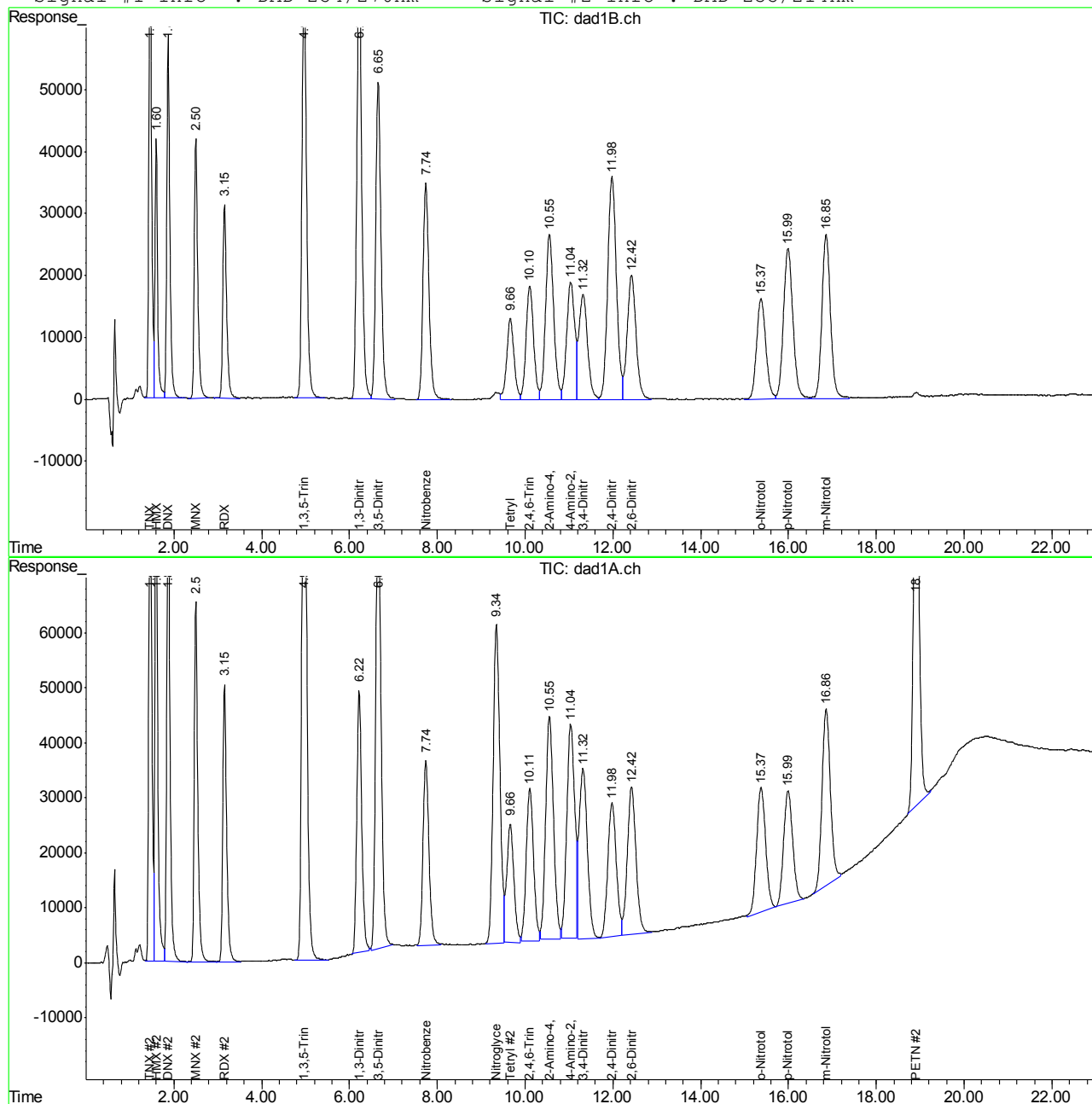
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 (f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.  
 BB053785.D 8330B\_0324PLUS.M Tue Mar 28 08:28:48 2017

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0324BPL\BB053785.D\dad1B.ch Vial: 47  
Signal #2 : C:\HPCHEM\1\DATA\0324BPL\BB053785.D\dad1A.ch  
Acq On : 24-Mar-2017, 14:29:10 Operator: evitam  
Sample : ic1564-1000 Inst : G1315B  
Misc : op64214, gbb1564, 10.0,,,50,1,soil Multiplr: 1.00  
IntFile Signal #1: events.e IntFile Signal #2: events2.e  
Quant Time: Mar 28 8:26 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
Title : Explosives by 8330A,8330B,8332  
Last Update : Mon Mar 27 09:45:21 2017  
Response via : Multiple Level Calibration  
DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





# Manual Integration Approval Summary

Page 1 of 1

**Sample Number:** GBB1564-IC1564

**Method:** SW846 8330B

**Lab FileID:** BB053785.D

**Analyst approved:** 03/27/17 14:02

**Injection Time:** 03/24/17 14:29

**Supervisor approved:** 03/29/17 14:53

(b) (6)

(b) (6)

Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3-Dinitrobenzene	99-65-0	2	6.22	Poorly defined baseline
3,5-Dinitroaniline	618-87-1	2	6.65	Poorly defined baseline
Nitrobenzene	98-95-3	2	7.74	Poorly defined baseline
o-Nitrotoluene	88-72-2	2	15.37	Poorly defined baseline
m-Nitrotoluene	99-08-1	2	16.86	Poorly defined baseline
PETN	78-11-5	2	18.91	Poorly defined baseline

9.7.6.1

9

(b) (6)

03/29/17 14:53

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0324BPL\BB053786.D\dad1B.ch Vial: 48  
 Signal #2 : C:\HPCHEM\1\DATA\0324BPL\BB053786.D\dad1A.ch  
 Acq On : 24-Mar-2017, 14:59:08 Operator: evitam  
 Sample : ic1564-2000 Inst : G1315B  
 Misc : op64214, gbb1564, 10.0, , , 50, 1, soil Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e  
 Quant Time: Mar 27 09:56:18 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
 Title : Explosives by 8330A, 8330B, 8332  
 Last Update : Mon Mar 27 09:45:21 2017  
 Response via : Initial Calibration  
 DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
 Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
 Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
-----						
System Monitoring Compounds						
15) S 3,4-Dinitrotolue	11.33	11.33	4680214	8397373	1958.338	1962.405
Spiked Amount	500.000	Range	69 - 134	Recovery	= 391.67%#	392.48%#
Target Compounds						
1) TNX	1.46	1.46	6709460	10396178	2167.597	1854.843
2) HMX	1.60	1.60	3618304	9892104	2249.591	2036.296
3) DNx	1.87	1.87	5855997	9373823	2116.440	1876.985
4) MNX	2.50	2.50	4738228	7428814	1905.537	1910.141
5) RDX	3.15	3.15	3864961	6251786	2069.767	2116.430
6) 1,3,5-Trinitrobe	4.97	4.97	10137004	19809170	2540.274	2175.558
7) 1,3-Dinitrobenze	6.22	6.22	11256941	7563827	2174.293	1955.047m
8) 3,5-Dinitroanili	6.65	6.65	8595893	14541011	2184.682	2195.524m
9) Nitrobenzene	7.74	7.73	6658885	6352983	1952.985	1886.746m
10) Nitroglycerin	0.00	9.34	0	12969933	N.D. d	9981.370m
11) Tetryl	9.67	9.66	3104542	5184283	1508.154	1692.752m
12) 2,4,6-Trinitroto	10.11	10.11	4444400	6690075	1433.477	1717.387m
13) 2-Amino-4,6-Dini	10.55	10.55	6995158	10537067	2145.980	1901.149m
14) 4-Amino-2,6-Dini	11.04	11.04	4980522	10255137	2197.177	1873.691
16) 2,4-Dinitrotolue	11.98	11.98	10087082	6695732	1917.610	2203.666
17) 2,6-Dinitrotolue	12.43	12.43	5763489	7498505	1932.007	2155.622
18) o-Nitrotoluene	15.38	15.38	4740424	6500960	1953.989	1988.512
19) p-Nitrotoluene	15.99	15.99	7317346	6085852	1952.985	1956.033
20) m-Nitrotoluene	16.86	16.86	7136828	8399495	2128.072	2143.218
21) PETN	0.00	18.91	0	13685288	N.D. d	9084.753m

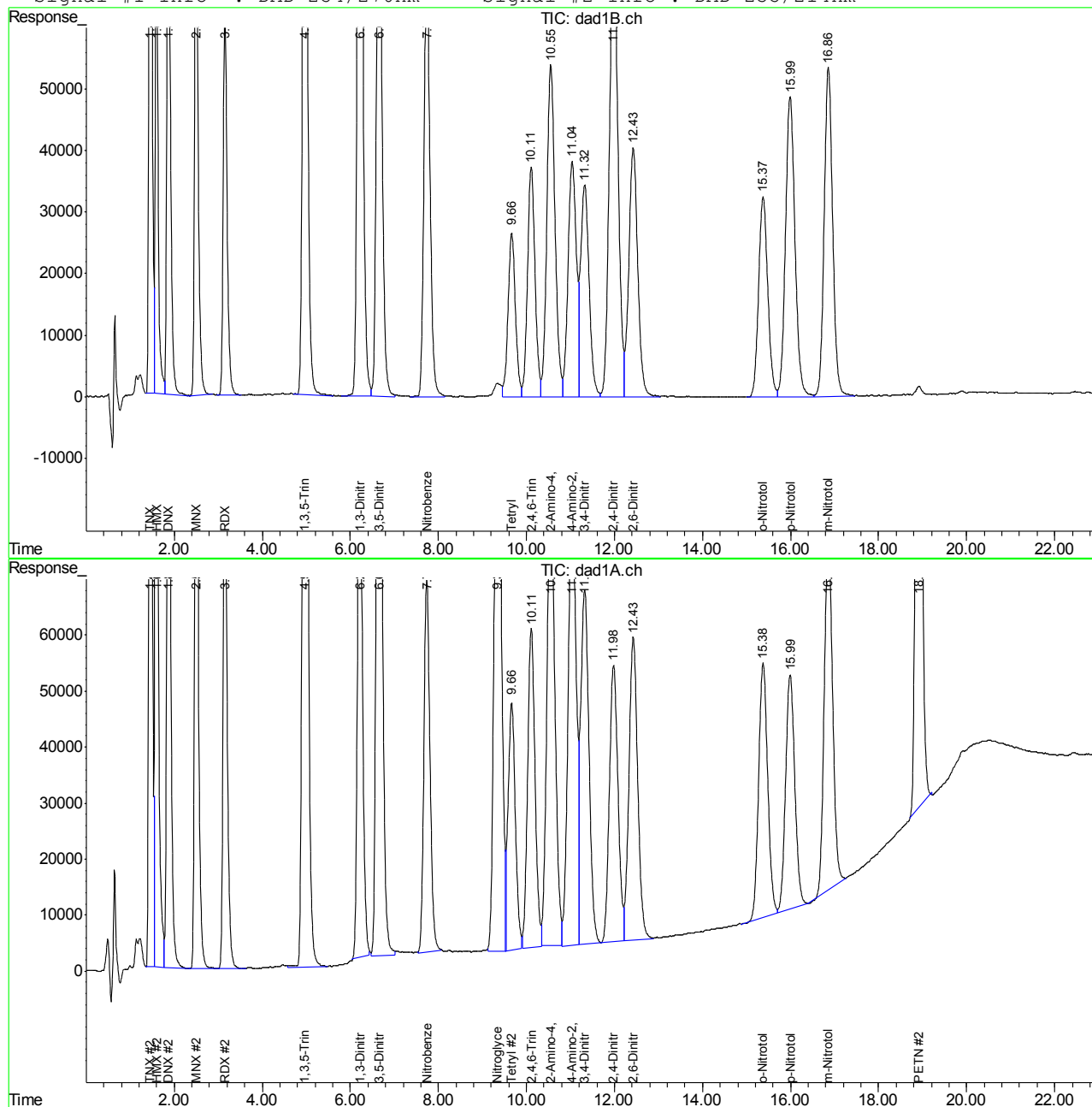
-----  
 (f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.  
 BB053786.D 8330B\_0324PLUS.M Tue Mar 28 08:28:49 2017

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0324BPL\BB053786.D\dad1B.ch Vial: 48  
Signal #2 : C:\HPCHEM\1\DATA\0324BPL\BB053786.D\dad1A.ch  
Acq On : 24-Mar-2017, 14:59:08 Operator: evitam  
Sample : ic1564-2000 Inst : G1315B  
Misc : op64214, gbb1564, 10.0,,,50,1,soil Multiplr: 1.00  
IntFile Signal #1: events.e IntFile Signal #2: events2.e  
Quant Time: Mar 28 8:28 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
Title : Explosives by 8330A,8330B,8332  
Last Update : Mon Mar 27 09:45:21 2017  
Response via : Multiple Level Calibration  
DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm



## Manual Integration Approval Summary

Page 1 of 1

**Sample Number:** GBB1564-IC1564      **Method:** SW846 8330B  
**Lab FileID:** BB053786.D      **Analyst approved:** 03/27/17 14:02 (b) (6)  
**Injection Time:** 03/24/17 14:59      **Supervisor approved:** 03/29/17 14:53 (b) (6)

Parameter	CAS	Sig#	R.T. (min.)	Reason
PETN	78-11-5	2	18.91	Poorly defined baseline

9.7.7.1

9

(b) (6)  
03/29/17 14:53

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0324BPL\BB053787.D\dad1B.ch Vial: 49  
 Signal #2 : C:\HPCHEM\1\DATA\0324BPL\BB053787.D\dad1A.ch  
 Acq On : 24-Mar-2017, 15:29:05 Operator: evitam  
 Sample : icv1564-500 Inst : G1315B  
 Misc : op64214, gbb1564, 10.0,,,50,1,soil Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e  
 Quant Time: Mar 27 10:08:29 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
 Title : Explosives by 8330A,8330B,8332  
 Last Update : Mon Mar 27 10:08:20 2017  
 Response via : Initial Calibration  
 DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
 Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
 Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
-----						
System Monitoring Compounds						
15) S 3,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
Spiked Amount	500.000	Range	69 - 134	Recovery	=	0.00%# 0.00%#
Target Compounds						
1) TNX	1.46	1.46	1671247	2596129	513.112	501.911
2) HMX	1.60	1.60	897308	2504773	481.462	519.056
3) DNX	1.87	1.87	1424717	2287610	483.804	477.088
4) MNX	2.50	2.50	1189713	1846229	521.596	508.157
5) RDX	3.15	3.15	958856	1525142	476.203	479.305
6) 1,3,5-Trinitrobe	0.00	0.00	0	0	N.D. d	N.D. d
7) 1,3-Dinitrobenze	6.22	6.22	2589492	1772725	454.918	454.488m
8) 3,5-Dinitroanili	6.66	6.65	2267602	3810995	531.440	527.274m
9) Nitrobenzene	7.74	7.74	1629684	1549554	476.096	489.161m
10) Nitroglycerin	0.00	9.36	0	3366133	N.D. d	2614.825m
11) Tetryl	9.67	9.67	1374481	2254461	866.868	963.498m
12) 2,4,6-Trinitroto	10.11	10.11	1645156	2101142	744.635	635.178m
13) 2-Amino-4,6-Dini	10.56	10.56	1718695	2505960	492.630	495.552m
14) 4-Amino-2,6-Dini	11.04	11.04	1296875	2559545	519.654	565.896
16) 2,4-Dinitrotolue	11.99	11.99	2446387	1631364	473.812	514.328
17) 2,6-Dinitrotolue	12.43	12.43	1433199	1853204	467.241	512.716
18) o-Nitrotoluene	15.38	15.39	1165905	1556919	473.271	475.339
19) p-Nitrotoluene	16.00	16.00	1772614	1358298	489.225	502.135
20) m-Nitrotoluene	16.87	16.87	1715241	2026203	467.692	518.297m
21) PETN	0.00	18.92	0	3876212	N.D. d	2954.885m

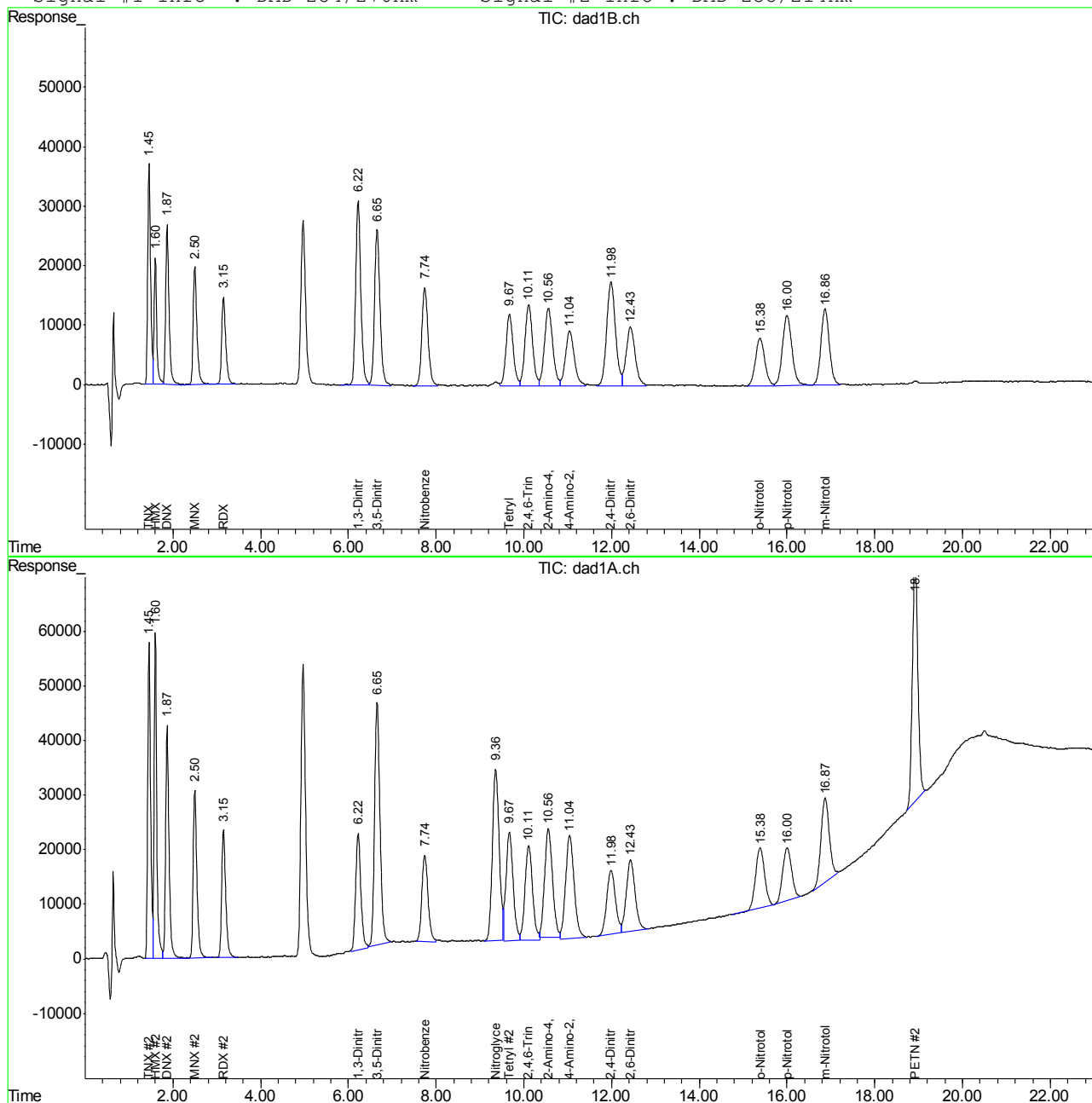
-----  
 (f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.  
 BB053787.D 8330B\_0324PLUS.M Wed Mar 29 11:27:02 2017

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0324BPL\BB053787.D\dad1B.ch Vial: 49  
Signal #2 : C:\HPCHEM\1\DATA\0324BPL\BB053787.D\dad1A.ch  
Acq On : 24-Mar-2017, 15:29:05 Operator: evitam  
Sample : icv1564-500 Inst : G1315B  
Misc : op64214, gbb1564, 10.0, , , 50, 1, soil Multiplr: 1.00  
IntFile Signal #1: events.e IntFile Signal #2: events2.e  
Quant Time: Mar 29 11:26 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
Title : Explosives by 8330A, 8330B, 8332  
Last Update : Mon Mar 27 10:08:20 2017  
Response via : Multiple Level Calibration  
DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm



# Manual Integration Approval Summary

Page 1 of 1

**Sample Number:** GBB1564-ICV1564

**Method:** SW846 8330B

**Lab FileID:** BB053787.D

**Analyst approved:** 03/29/17 11:28 (b) (6)

**Injection Time:** 03/24/17 15:29

**Supervisor approved:** 03/29/17 14:53 (b) (6)

Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3-Dinitrobenzene	99-65-0	2	6.22	Poorly defined baseline
3,5-Dinitroaniline	618-87-1	2	6.65	Poorly defined baseline
Nitrobenzene	98-95-3	2	7.74	Poorly defined baseline
Nitroglycerine	55-63-0	2	9.36	Poorly defined baseline
Tetryl	479-45-8	2	9.67	Poorly defined baseline
2,4,6-Trinitrotoluene	118-96-7	2	10.11	Poorly defined baseline
2-amino-4,6-Dinitrotoluene	35572-78-2	2	10.56	Poorly defined baseline
m-Nitrotoluene	99-08-1	2	16.87	Poorly defined baseline
PETN	78-11-5	2	18.92	Poorly defined baseline

9.7.8.1

9

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0324BPL\BB053788.D\dad1B.ch Vial: 50  
 Signal #2 : C:\HPCHEM\1\DATA\0324BPL\BB053788.D\dad1A.ch  
 Acq On : 24-Mar-2017, 15:59:05 Operator: evitam  
 Sample : icv1564-500,b Inst : G1315B  
 Misc : op64214,gb1564,10.0,,,50,1,soil Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e  
 Quant Time: Mar 27 09:55:43 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
 Title : Explosives by 8330A,8330B,8332  
 Last Update : Mon Mar 27 09:45:21 2017  
 Response via : Initial Calibration  
 DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
 Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
 Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
-----						
System Monitoring Compounds						
15) S 3,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
Spiked Amount	500.000	Range	69 - 134	Recovery	=	0.00%# 0.00%#
Target Compounds						
1) TNX	0.00	0.00	0	0	N.D. d	N.D. d
2) HMX	0.00	0.00	0	0	N.D. d	N.D. d
3) DNX	0.00	0.00	0	0	N.D. d	N.D. d
4) MNX	0.00	0.00	0	0	N.D. d	N.D. d
5) RDX	0.00	0.00	0	0	N.D. d	N.D. d
6) 1,3,5-Trinitrobe	4.97	4.97	1852605	3624900	464.252	441.870
7) 1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8) 3,5-Dinitroanili	0.00	0.00	0	0	N.D. d	N.D. d
9) Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
10) Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11) Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
12) 2,4,6-Trinitroto	0.00	0.00	0	0	N.D. d	N.D. d
13) 2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
14) 4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
16) 2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
17) 2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18) o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
19) p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20) m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
21) PETN	0.00	0.00	0	0	N.D. d	N.D. d

-----  
 (f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.  
 BB053788.D 8330B\_0324PLUS.M Wed Mar 29 11:27:03 2017

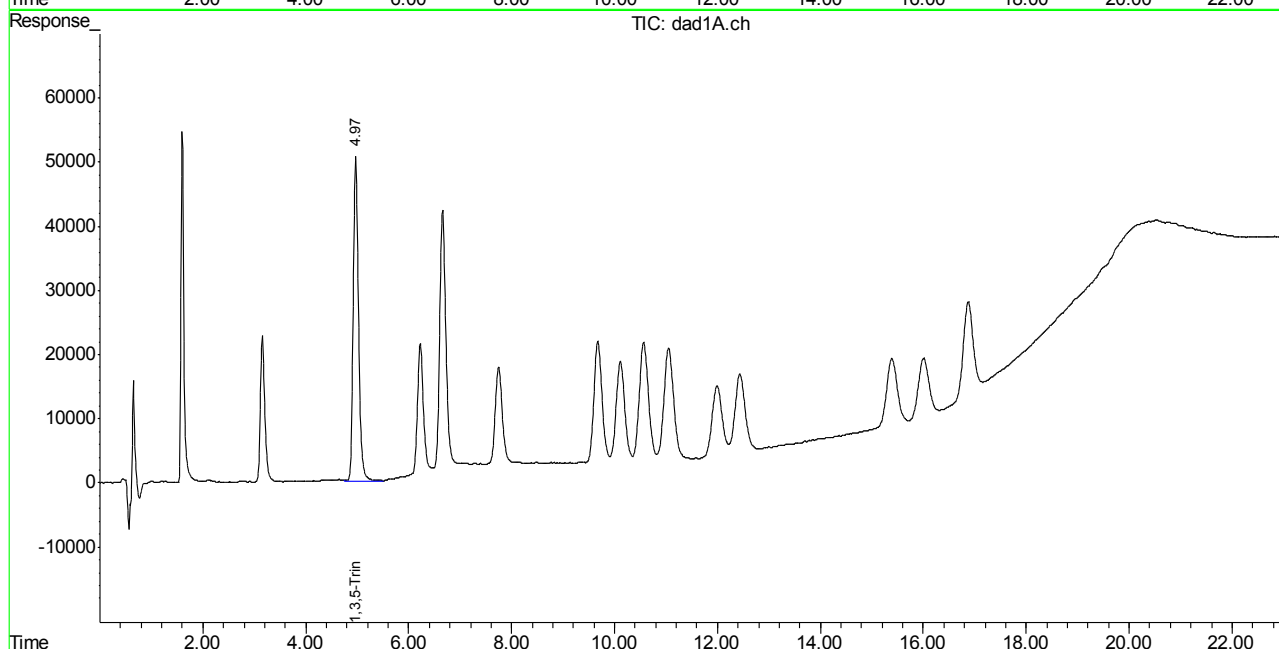
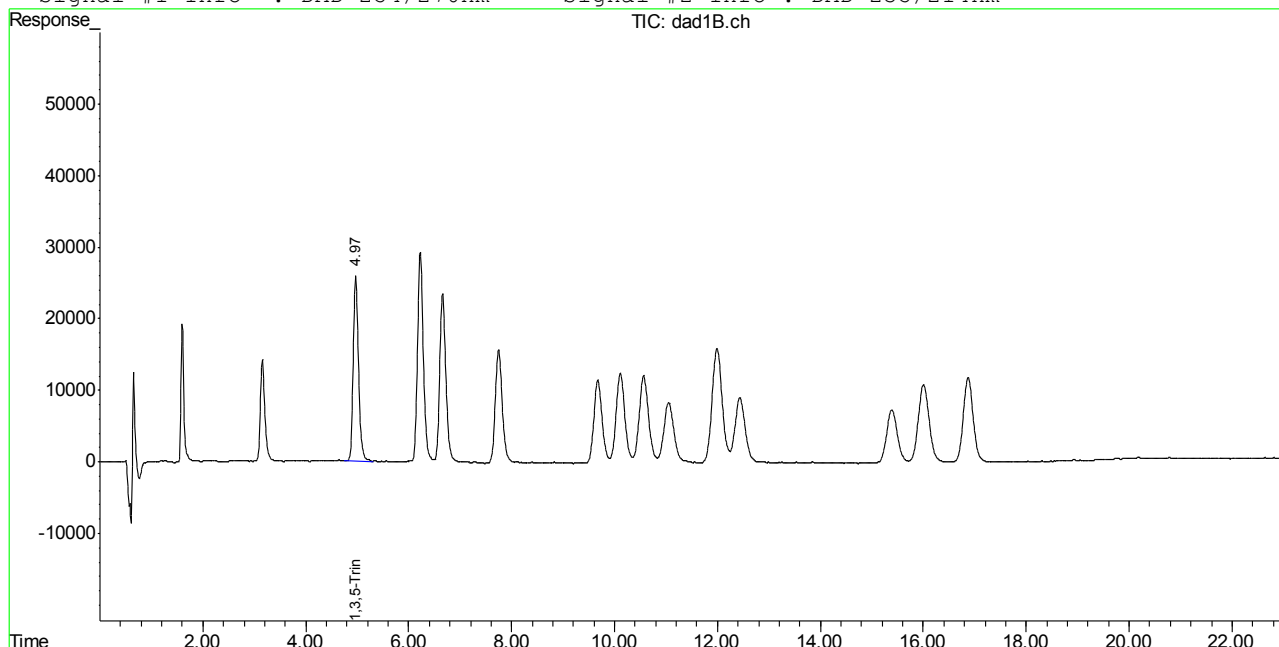


## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0324BPL\BB053788.D\dad1B.ch Vial: 50  
Signal #2 : C:\HPCHEM\1\DATA\0324BPL\BB053788.D\dad1A.ch  
Acq On : 24-Mar-2017, 15:59:05 Operator: evitam  
Sample : icv1564-500,b Inst : G1315B  
Misc : op64214,gbbl564,10.0,,,50,1,soil Multiplr: 1.00  
IntFile Signal #1: events.e IntFile Signal #2: events2.e  
Quant Time: Mar 29 11:26 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
Title : Explosives by 8330A,8330B,8332  
Last Update : Mon Mar 27 09:45:21 2017  
Response via : Multiple Level Calibration  
DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm



(b) (6)  
03/31/17 13:58

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0329BPL\BB053965.D\dad1B.ch Vial: 2  
 Signal #2 : C:\HPCHEM\1\DATA\0329BPL\BB053965.D\dad1A.ch  
 Acq On : 30-Mar-2017, 20:27:38 Operator: evitam  
 Sample : cc1564-1000 Inst : G1315B  
 Misc : op64321, gbb1567, 10.0,,,50,1,water Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e  
 Quant Time: Mar 31 09:03:54 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
 Title : Explosives by 8330A,8330B,8332  
 Last Update : Mon Mar 27 10:20:22 2017  
 Response via : Initial Calibration  
 DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
 Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
 Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
-----						
System Monitoring Compounds						
15) S 3,4-Dinitrotolue	11.14	11.14	2263097	3998622	921.716	985.108
Spiked Amount	500.000	Range	70 - 136	Recovery	=	184.34%# 197.02%#
Target Compounds						
1) TNX	1.44	1.44	3266887	5038911	1003.012	974.176
2) HMX	1.57	1.57	1696996	4704326	910.544	968.048
3) DNX	1.85	1.85	2911128	4699639	988.559	980.124
4) MNX	2.46	2.46	2298846	3628481	1007.864	998.706
5) RDX	3.10	3.10	1901407	3068680	944.308	964.392
6) 1,3,5-Trinitrobe	4.87	4.87	4860688	9537494	963.864	979.806
7) 1,3-Dinitrobenze	6.13	6.12	5480989	3736568	962.893	957.974m
8) 3,5-Dinitroanili	6.54	6.54	4199616	7068545	982.309	964.390m
9) Nitrobenzene	7.66	7.66	3250808	3140522	949.692	991.396m
10) Nitroglycerin	0.00	9.19	0	6299668	N.D. d	4893.606m
11) Tetryl	9.48	9.48	1509096	2548154	951.768	1089.015
12) 2,4,6-Trinitroto	9.92	9.92	2147821	3321039	972.152	1003.955
13) 2-Amino-4,6-Dini	10.36	10.36	3401239	5185821	974.897	1025.492
14) 4-Amino-2,6-Dini	10.84	10.84	2306787	4884305	924.322m	1079.882m
16) 2,4-Dinitrotolue	11.78	11.78	4941439	3260176	957.049	1027.852
17) 2,6-Dinitrotolue	12.24	12.24	2832589	3670089	923.459	1015.383
18) o-Nitrotoluene	15.25	15.25	2290317	3157382	929.700	963.972
19) p-Nitrotoluene	15.85	15.85	3537446	2911515	976.302	1076.327
20) m-Nitrotoluene	16.74	16.74	3444059	4080453	939.085	1043.767m
21) PETN	0.00	18.80	0	6733852	N.D. d	5133.299m

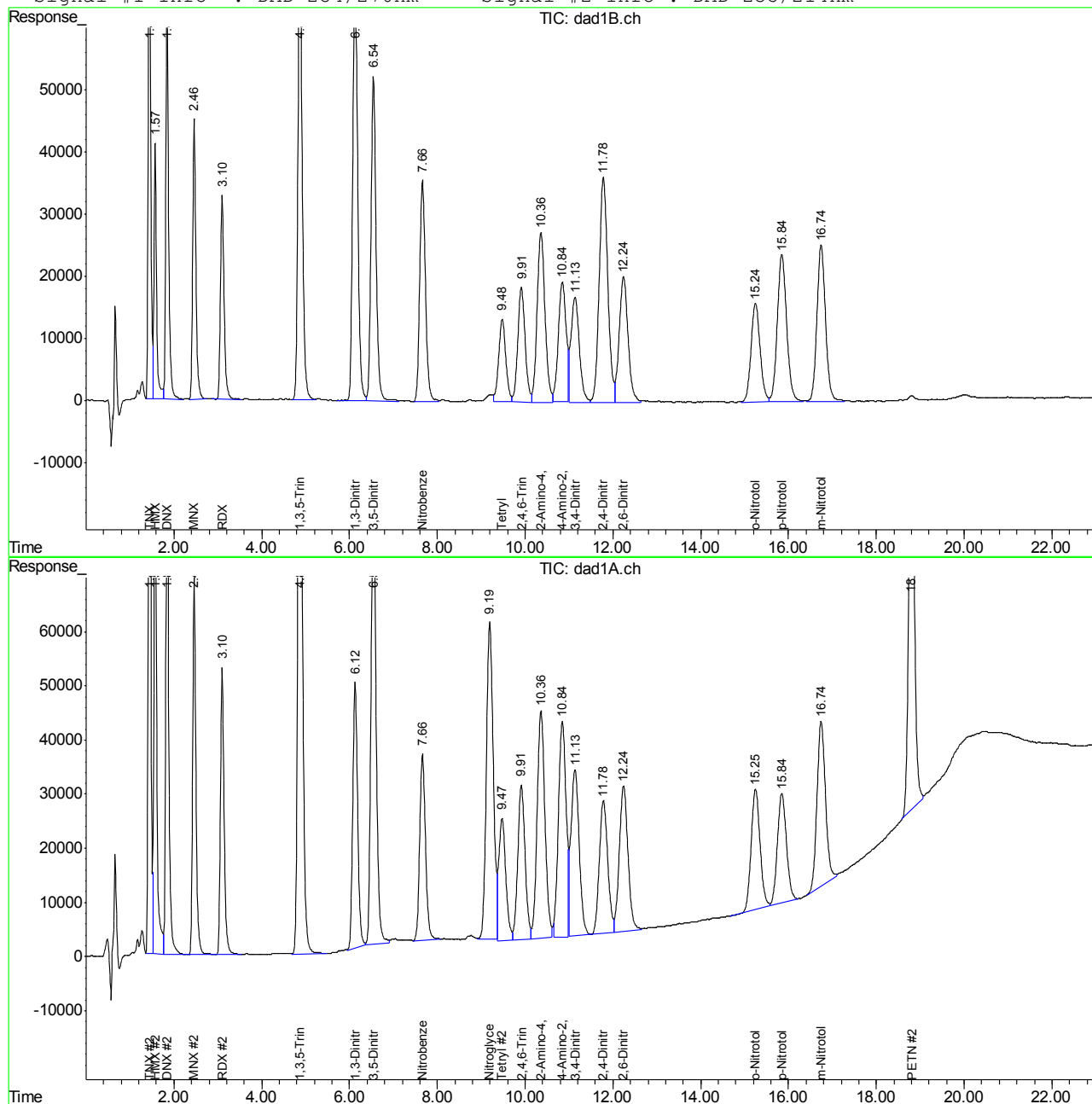
-----  
 (f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.  
 BB053965.D 8330B\_0324PLUS.M Fri Mar 31 11:05:09 2017

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0329BPL\BB053965.D\dad1B.ch Vial: 2  
Signal #2 : C:\HPCHEM\1\DATA\0329BPL\BB053965.D\dad1A.ch  
Acq On : 30-Mar-2017, 20:27:38 Operator: evitam  
Sample : cc1564-1000 Inst : G1315B  
Misc : op64321,gb1567,10.0,,,50,1,water Multiplr: 1.00  
IntFile Signal #1: events.e IntFile Signal #2: events2.e  
Quant Time: Mar 31 11:05 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
Title : Explosives by 8330A,8330B,8332  
Last Update : Mon Mar 27 10:20:22 2017  
Response via : Multiple Level Calibration  
DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm



# Manual Integration Approval Summary

Page 1 of 1

**Sample Number:** GBB1567-CC1564

**Method:** SW846 8330B

**Lab FileID:** BB053965.D

**Analyst approved:** 03/31/17 10:33 (b) (6)

**Injection Time:** 03/30/17 20:27

**Supervisor approved:** 03/31/17 13:58 (b) (6)

Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3-Dinitrobenzene	99-65-0	2	6.12	Poorly defined baseline
3,5-Dinitroaniline	618-87-1	2	6.54	Poorly defined baseline
Nitrobenzene	98-95-3	2	7.66	Poorly defined baseline
Nitroglycerine	55-63-0	2	9.19	Poorly defined baseline
4-amino-2,6-Dinitrotoluene	19406-51-0	1	10.84	Poorly defined baseline
4-amino-2,6-Dinitrotoluene	19406-51-0	2	10.84	Poorly defined baseline
m-Nitrotoluene	99-08-1	2	16.74	Poorly defined baseline
PETN	78-11-5	2	18.80	Poorly defined baseline

9.7.10.1

9

(b) (6)  
03/31/17 13:58

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0329BPL\BB053977.D\dad1B.ch Vial: 2  
 Signal #2 : C:\HPCHEM\1\DATA\0329BPL\BB053977.D\dad1A.ch  
 Acq On : 31-Mar-2017, 02:27:29 Operator: evitam  
 Sample : cc1564-1000 Inst : G1315B  
 Misc : op64396, gbb1567, 10.0,,,10,1,SOIL Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e  
 Quant Time: Mar 31 10:06:54 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
 Title : Explosives by 8330A,8330B,8332  
 Last Update : Fri Mar 31 10:06:47 2017  
 Response via : Initial Calibration  
 DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
 Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
 Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
-----						
System Monitoring Compounds						
15) S 3,4-Dinitrotolue	11.11	11.11	2259268	3984172	920.156	981.664
Spiked Amount	500.000	Range	69 - 134	Recovery	=	184.03%# 196.33%#
Target Compounds						
1) TNX	1.44	1.44	3237507	4994949	993.991	965.676
2) HMX	1.57	1.57	1636116	4599114	877.878	946.712
3) DNx	1.84	1.84	2922016	4614416	992.256	962.351
4) MNX	2.46	2.46	2311773	3579975	1013.532	985.355
5) RDX	3.09	3.09	1866612	3031868	927.027	952.823
6) 1,3,5-Trinitrobe	4.86	4.86	4860556	9440341	963.838	969.826
7) 1,3-Dinitrobenze	6.12	6.12	5488476	3816334	964.208	978.424
8) 3,5-Dinitroanili	6.54	6.53	4141339	6913699	968.735	943.879m
9) Nitrobenzene	7.65	7.65	3207551	3070830	937.055	969.395
10) Nitroglycerin	0.00	9.17	0	6322996	N.D. d	4911.727
11) Tetryl	9.46	9.46	1513168	2423536	954.336	1035.756
12) 2,4,6-Trinitroto	9.89	9.89	2141611	3191749	969.341	964.871
13) 2-Amino-4,6-Dini	10.34	10.34	3368875	5046595	965.621	997.961
14) 4-Amino-2,6-Dini	10.83	10.83	2424455	4904512	971.471	1084.350
16) 2,4-Dinitrotolue	11.76	11.76	4949754	3260789	958.659	1028.045
17) 2,6-Dinitrotolue	12.22	12.22	2852570	3686692	929.973	1019.977
18) o-Nitrotoluene	15.22	15.22	2266118	3028080	919.877	924.495
19) p-Nitrotoluene	15.82	15.82	3491579	2872955	963.643	1062.072
20) m-Nitrotoluene	16.72	16.72	3400712	4006972	927.266	1024.971m
21) PETN	0.00	18.78	0	6823644	N.D. d	5201.749m

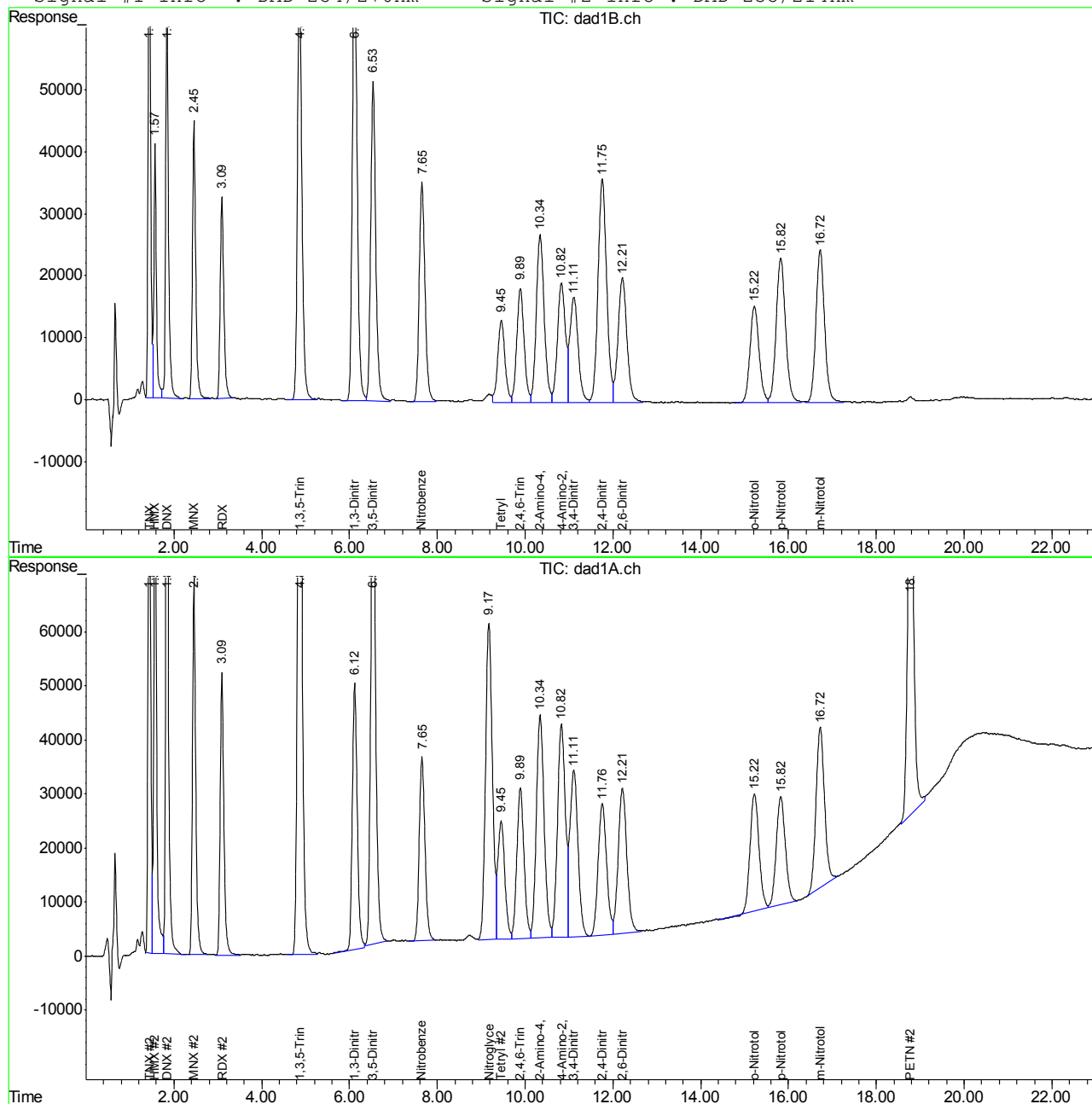
-----  
 (f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.  
 BB053977.D 8330B\_0324PLUS.M Fri Mar 31 10:15:50 2017

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0329BPL\BB053977.D\dad1B.ch Vial: 2  
Signal #2 : C:\HPCHEM\1\DATA\0329BPL\BB053977.D\dad1A.ch  
Acq On : 31-Mar-2017, 02:27:29 Operator: evitam  
Sample : cc1564-1000 Inst : G1315B  
Misc : op64396, gbb1567, 10.0,,,10,1,SOIL Multiplr: 1.00  
IntFile Signal #1: events.e IntFile Signal #2: events2.e  
Quant Time: Mar 31 10:07 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
Title : Explosives by 8330A,8330B,8332  
Last Update : Fri Mar 31 10:06:47 2017  
Response via : Multiple Level Calibration  
DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm



Manual Integration Approval Summary

Sample Number: GBB1567-CC1564

Method: SW846 8330B

Lab FileID: BB053977.D

Analyst approved: 03/31/17 10:33 (b) (6)

Injection Time: 03/31/17 02:27

Supervisor approved: 03/31/17 13:58 (b) (6)

Parameter	CAS	Sig#	R.T. (min.)	Reason
3,5-Dinitroaniline	618-87-1	2	6.53	Poorly defined baseline
m-Nitrotoluene	99-08-1	2	16.72	Poorly defined baseline
PETN	78-11-5	2	18.78	Poorly defined baseline

9.7.11.1  
9

(b) (6)  
03/31/17 13:58

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0329BPL\BB053989.D\dad1B.ch Vial: 2  
 Signal #2 : C:\HPCHEM\1\DATA\0329BPL\BB053989.D\dad1A.ch  
 Acq On : 31-Mar-2017, 09:03:03 Operator: evitam  
 Sample : ecc1564-1000 Inst : G1315B  
 Misc : op64396, gbb1567, 10.0,,,10,1,SOIL Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e  
 Quant Time: Mar 31 10:09:39 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
 Title : Explosives by 8330A,8330B,8332  
 Last Update : Fri Mar 31 10:06:47 2017  
 Response via : Initial Calibration  
 DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
 Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
 Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
-----						
System Monitoring Compounds						
15) S 3,4-Dinitrotolue	11.11	11.11	2292549	4007908	933.711	987.322
Spiked Amount	500.000	Range	69 - 134	Recovery	=	186.74%# 197.46%#
Target Compounds						
1) TNX	1.44	1.44	3266808	5009179	1002.987	968.427
2) HMX	1.57	1.57	1636210	4549364	877.928	936.618
3) DNx	1.85	1.85	2929821	4619644	994.906	963.441
4) MNx	2.46	2.46	2292055	3565055	1004.887	981.248
5) RDX	3.10	3.10	1869807	3039727	928.614	955.293
6) 1,3,5-Trinitrobe	4.87	4.87	4843948	9517516	960.545	977.754
7) 1,3-Dinitrobenze	6.12	6.12	5498424	3875766	965.956	993.661
8) 3,5-Dinitroanili	6.54	6.54	4160645	7034482	973.232	959.881m
9) Nitrobenzene	7.65	7.65	3199374	3061236	934.666	966.367
10) Nitroglycerin	0.00	9.17	0	6352997	N.D. d	4935.032
11) Tetryl	9.46	9.45	1532128	2408860	966.294	1029.484
12) 2,4,6-Trinitroto	9.89	9.89	2154806	3195915	975.313	966.130
13) 2-Amino-4,6-Dini	10.34	10.34	3401973	5063712	975.108	1001.345
14) 4-Amino-2,6-Dini	10.82	10.82	2435476	4912225	975.888	1086.055
16) 2,4-Dinitrotolue	11.75	11.75	4987163	3286391	965.904	1036.117
17) 2,6-Dinitrotolue	12.21	12.21	2857010	3678055	931.421	1017.587
18) o-Nitrotoluene	15.22	15.22	2235602	3070536	907.490	937.457
19) p-Nitrotoluene	15.82	15.82	3463433	2852239	955.875	1054.413
20) m-Nitrotoluene	16.72	16.71	3343989	3890460	911.799	995.168m
21) PETN	0.00	18.77	0	6736180	N.D. d	5135.074m

-----  
 (f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.  
 BB053989.D 8330B\_0324PLUS.M Fri Mar 31 10:15:58 2017

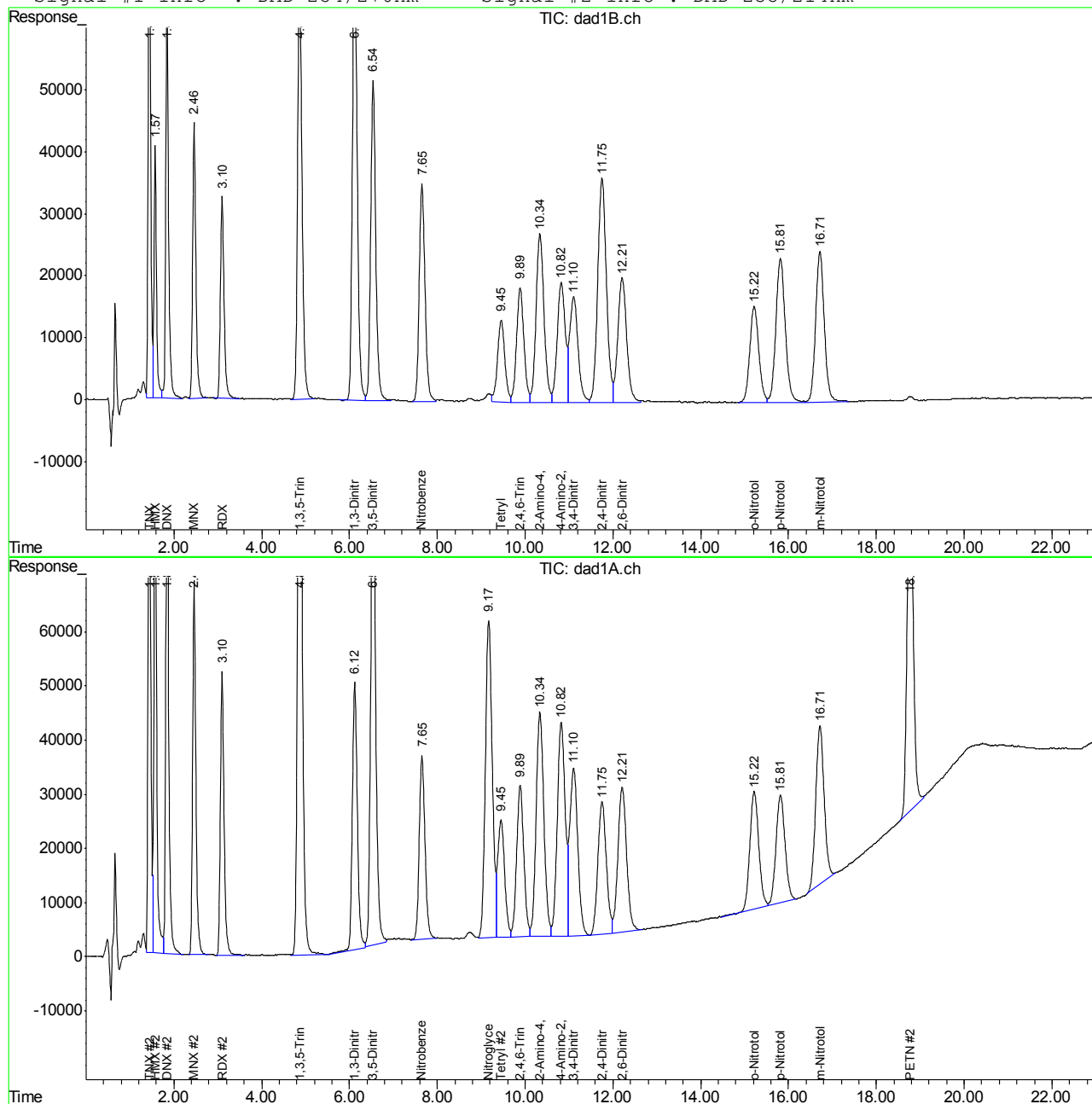


## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0329BPL\BB053989.D\dad1B.ch Vial: 2  
Signal #2 : C:\HPCHEM\1\DATA\0329BPL\BB053989.D\dad1A.ch  
Acq On : 31-Mar-2017, 09:03:03 Operator: evitam  
Sample : ecc1564-1000 Inst : G1315B  
Misc : op64396, gbb1567, 10.0,,,10,1,SOIL Multiplr: 1.00  
IntFile Signal #1: events.e IntFile Signal #2: events2.e  
Quant Time: Mar 31 10:15 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
Title : Explosives by 8330A,8330B,8332  
Last Update : Fri Mar 31 10:06:47 2017  
Response via : Multiple Level Calibration  
DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm



## Manual Integration Approval Summary

Page 1 of 1

**Sample Number:** GBB1567-ECC1564      **Method:** SW846 8330B  
**Lab FileID:** BB053989.D      **Analyst approved:** 03/31/17 10:33 (b) (6)  
**Injection Time:** 03/31/17 09:03      **Supervisor approved:** 03/31/17 13:58 (b) (6)

Parameter	CAS	Sig#	R.T. (min.)	Reason
3,5-Dinitroaniline	618-87-1	2	6.54	Poorly defined baseline
m-Nitrotoluene	99-08-1	2	16.71	Poorly defined baseline
PETN	78-11-5	2	18.77	Poorly defined baseline

9.7.12.1

9

(b) (6)  
04/03/17 08:54

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0331BPL\BB053991.D\dad1B.ch Vial: 31  
 Signal #2 : C:\HPCHEM\1\DATA\0331BPL\BB053991.D\dad1A.ch  
 Acq On : 31-Mar-2017, 10:52:29 Operator: evitam  
 Sample : IC1568-20 Inst : G1315B  
 Misc : op64321,gbbl568,10.0,,,50,1,water Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e  
 Quant Time: Mar 31 12:48:01 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
 Title : Explosives by 8330A,8330B,8332  
 Last Update : Fri Mar 31 10:06:47 2017  
 Response via : Initial Calibration  
 DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
 Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
 Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
-----						
System Monitoring Compounds						
15) S 3,4-Dinitrotolue	11.12	11.07	70823	78827	28.845m	20.079m
Spiked Amount	500.000	Range	70 - 136	Recovery	=	5.77%# 4.02%#
Target Compounds						
1) TNX	1.43	1.44	57401	89091	17.624m	17.224m
2) HMX	1.57	1.57	48072	160466	25.794m	33.508m
3) DNX	1.84	1.84	47021	109456	15.968m	22.827m#
4) MNX	2.45	2.45	37457	64187	16.422m	17.667m
5) RDX	3.09	3.09	45079	79017	22.388m	24.833m
6) 1,3,5-Trinitrobe	4.86	4.86	95060	195362	18.850	20.070m
7) 1,3-Dinitrobenze	6.11	6.11	119949	70976	21.072m	18.197m
8) 3,5-Dinitroanili	6.52	6.53	109665	170258	25.758m	23.945m
9) Nitrobenzene	7.64	7.63	73941	63003	21.601	19.889m
10) Nitroglycerin	0.00	9.18	0	115877	N.D. d	90.014m
11) Tetryl	9.45	9.44	58015	119489	36.589m	51.066m
12) 2,4,6-Trinitroto	9.88	9.88	84578	98460	38.282m	29.765m
13) 2-Amino-4,6-Dini	10.37	10.34	95091	143326	27.256	28.343m
14) 4-Amino-2,6-Dini	10.83	10.83	60425	110692	24.212m	24.473m
16) 2,4-Dinitrotolue	11.75	11.80	102841	57252	19.918m	18.050m
17) 2,6-Dinitrotolue	12.21	12.22	54036	75701	17.616m	20.944
18) o-Nitrotoluene	15.23	15.23	48035	89466	19.499	27.315 #
19) p-Nitrotoluene	15.84	15.87	65869	37086	18.179	13.710m
20) m-Nitrotoluene	16.71	16.75	81749	82370	22.290	21.070m
21) PETN	0.00	18.79	0	125867	N.D. d	95.950m

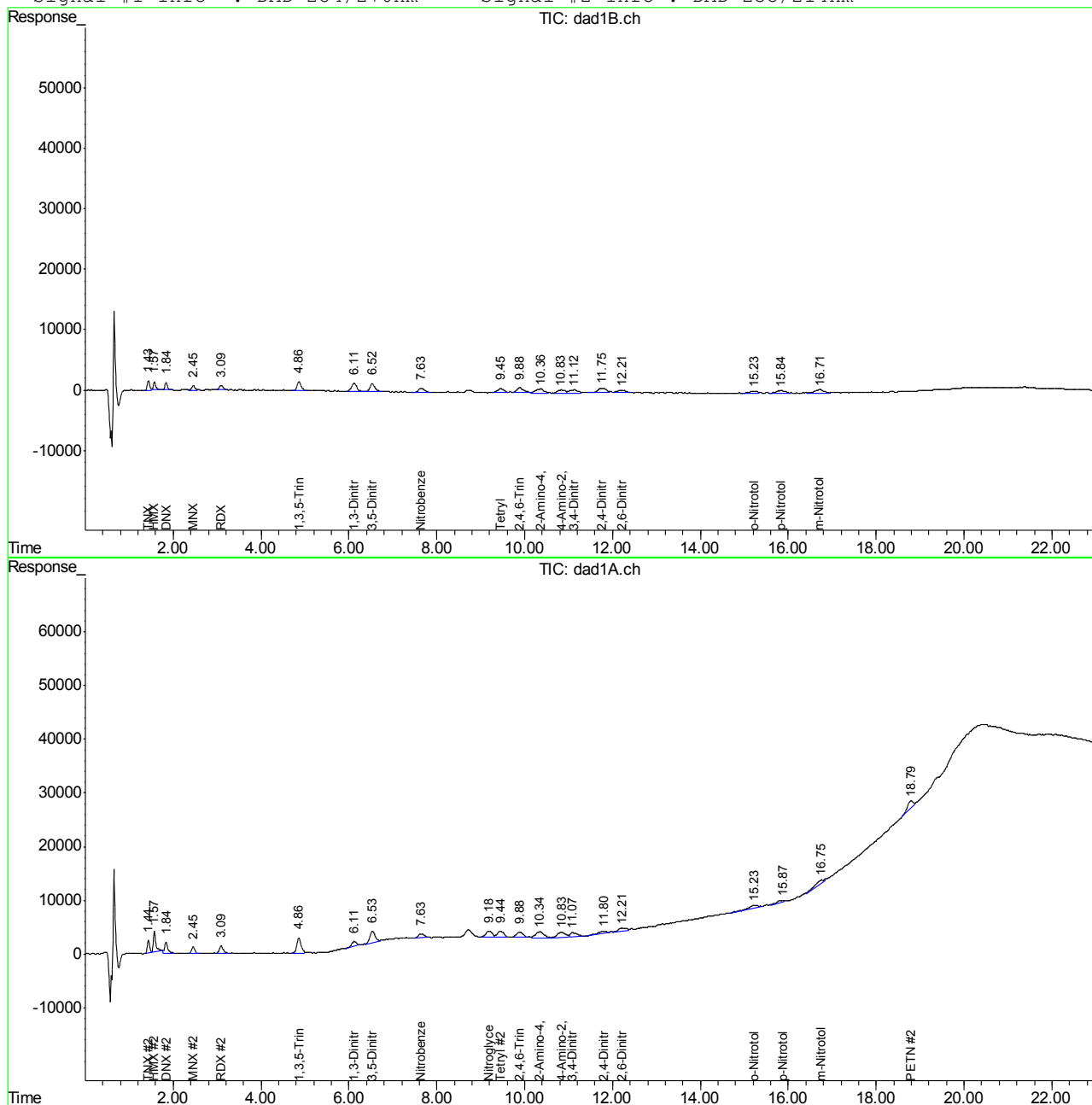
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.  
 BB053991.D 8330B\_0331PLUS.M Mon Apr 03 07:11:38 2017

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0331BPL\BB053991.D\dad1B.ch Vial: 31  
Signal #2 : C:\HPCHEM\1\DATA\0331BPL\BB053991.D\dad1A.ch  
Acq On : 31-Mar-2017, 10:52:29 Operator: evitam  
Sample : IC1568-20 Inst : G1315B  
Misc : op64321, gbb1568, 10.0, , , 50, 1, water Multiplr: 1.00  
IntFile Signal #1: events.e IntFile Signal #2: events2.e  
Quant Time: Mar 31 15:13 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
Title : Explosives by 8330A, 8330B, 8332  
Last Update : Fri Mar 31 10:06:47 2017  
Response via : Multiple Level Calibration  
DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm



# Manual Integration Approval Summary

Page 1 of 1

**Sample Number:** GBB1568-IC1568

**Method:** SW846 8330B

**Lab FileID:** BB053991.D

**Analyst approved:** 04/03/17 07:14

**Injection Time:** 03/31/17 10:52

**Supervisor approved:** 04/03/17 08:54

(b) (6)

(b) (6)

Parameter	CAS	Sig#	R.T. (min.)	Reason
TNX		1	1.43	Poorly defined baseline
TNX		2	1.44	Poorly defined baseline
HMX	2691-41-0	1	1.57	Poorly defined baseline
HMX	2691-41-0	2	1.57	Poorly defined baseline
DNX		1	1.84	Poorly defined baseline
DNX		2	1.84	Poorly defined baseline
MNX		1	2.45	Poorly defined baseline
MNX		2	2.45	Poorly defined baseline
RDX	121-82-4	1	3.09	Poorly defined baseline
RDX	121-82-4	2	3.09	Poorly defined baseline
1,3,5-Trinitrobenzene	99-35-4	2	4.86	Poorly defined baseline
1,3-Dinitrobenzene	99-65-0	1	6.11	Poorly defined baseline
1,3-Dinitrobenzene	99-65-0	2	6.11	Poorly defined baseline
3,5-Dinitroaniline	618-87-1	1	6.52	Poorly defined baseline
3,5-Dinitroaniline	618-87-1	2	6.53	Poorly defined baseline
Nitrobenzene	98-95-3	2	7.63	Poorly defined baseline
Nitroglycerine	55-63-0	2	9.18	Poorly defined baseline
Tetryl	479-45-8	2	9.44	Poorly defined baseline
Tetryl	479-45-8	1	9.45	Poorly defined baseline
2,4,6-Trinitrotoluene	118-96-7	1	9.88	Poorly defined baseline
2,4,6-Trinitrotoluene	118-96-7	2	9.88	Poorly defined baseline
2-amino-4,6-Dinitrotoluene	35572-78-2	2	10.34	Poorly defined baseline
4-amino-2,6-Dinitrotoluene	19406-51-0	1	10.83	Poorly defined baseline
4-amino-2,6-Dinitrotoluene	19406-51-0	2	10.83	Poorly defined baseline
3,4-Dinitrotoluene	610-39-9	2	11.07	Poorly defined baseline
3,4-Dinitrotoluene	610-39-9	1	11.12	Poorly defined baseline
2,4-Dinitrotoluene	121-14-2	1	11.75	Poorly defined baseline
2,4-Dinitrotoluene	121-14-2	2	11.80	Poorly defined baseline
2,6-Dinitrotoluene	606-20-2	1	12.21	Poorly defined baseline
p-Nitrotoluene	99-99-0	2	15.87	Poorly defined baseline
m-Nitrotoluene	99-08-1	2	16.75	Poorly defined baseline
PETN	78-11-5	2	18.79	Poorly defined baseline

9.7.13.1

9

(b) (6)  
04/03/17 08:54

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0331BPL\BB053992.D\dad1B.ch Vial: 32  
 Signal #2 : C:\HPCHEM\1\DATA\0331BPL\BB053992.D\dad1A.ch  
 Acq On : 31-Mar-2017, 11:22:26 Operator: evitam  
 Sample : IC1568-50 Inst : G1315B  
 Misc : op64321,gbbl568,10.0,,,50,1,water Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e  
 Quant Time: Mar 31 12:48:02 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
 Title : Explosives by 8330A,8330B,8332  
 Last Update : Fri Mar 31 10:06:47 2017  
 Response via : Initial Calibration  
 DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
 Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
 Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
-----						
System Monitoring Compounds						
15) S 3,4-Dinitrotolue	11.13	11.09	167789	223399	68.337	56.831m
Spiked Amount	500.000	Range	70 - 136	Recovery	=	13.67%# 11.37%#
Target Compounds						
1) TNX	1.44	1.44	183933	292143	56.472m	56.480m
2) HMX	1.57	1.57	145346	441332	77.987m	92.072m
3) DNx	1.84	1.84	175827	323708	59.707	67.510
4) MNX	2.46	2.45	128270	204176	56.237	56.197
5) RDX	3.09	3.09	136374	196449	67.728	61.738
6) 1,3,5-Trinitrobe	4.86	4.86	268022	505330	53.148	51.914
7) 1,3-Dinitrobenze	6.11	6.11	316826	227452	55.660m	58.314m
8) 3,5-Dinitroanili	6.53	6.53	266327	441740	62.544m	62.048m
9) Nitrobenzene	7.65	7.65	185262	173688	54.122	54.830m
10) Nitroglycerin	0.00	9.18	0	338758	N.D. d	263.148m
11) Tetryl	9.46	9.46	200092	277454	126.195	118.576m
12) 2,4,6-Trinitroto	9.89	9.89	238041	277960	107.743	84.028m
13) 2-Amino-4,6-Dini	10.34	10.34	227804	297560	65.296	58.842m
14) 4-Amino-2,6-Dini	10.81	10.82	155680	275890	62.381	60.997m
16) 2,4-Dinitrotolue	11.76	11.76	313981	187156	60.811	59.006m
17) 2,6-Dinitrotolue	12.21	12.22	191160	210791	62.321	58.318m
18) o-Nitrotoluene	15.23	15.22	134131	180454	54.447	55.094m
19) p-Nitrotoluene	15.82	15.82	188716	129357	52.084	47.821
20) m-Nitrotoluene	16.71	16.72	191776	186201	52.291	47.630m
21) PETN	0.00	18.77	0	376177	N.D.	286.765m#

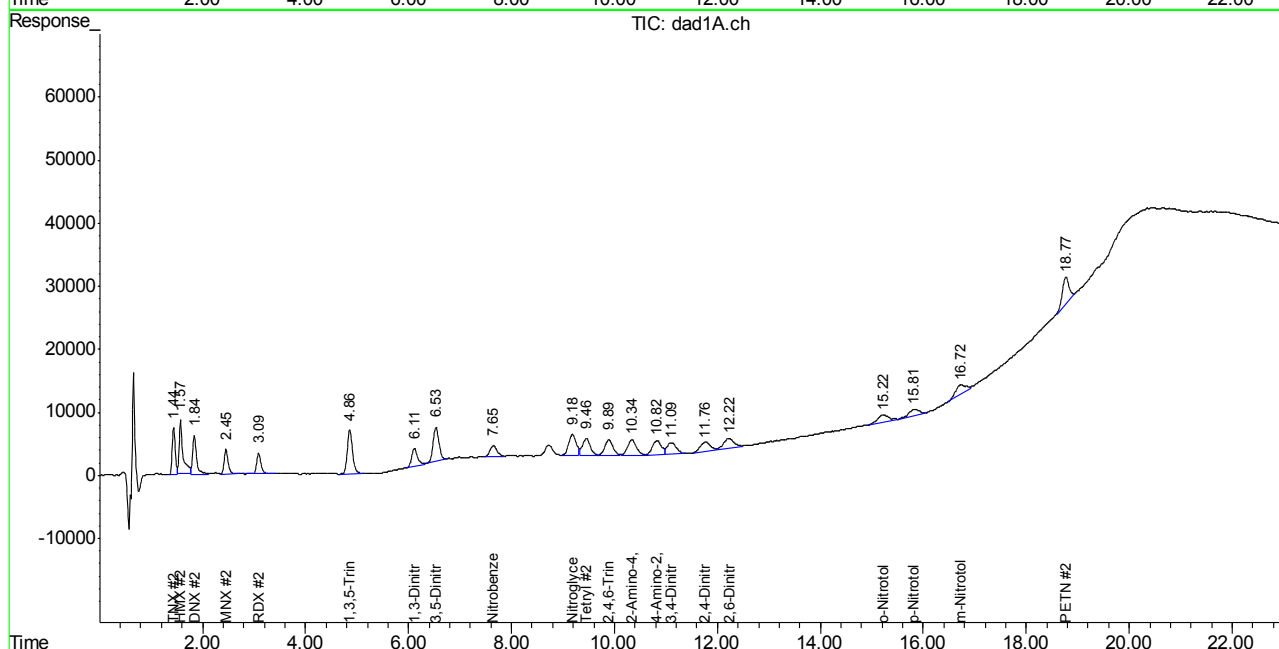
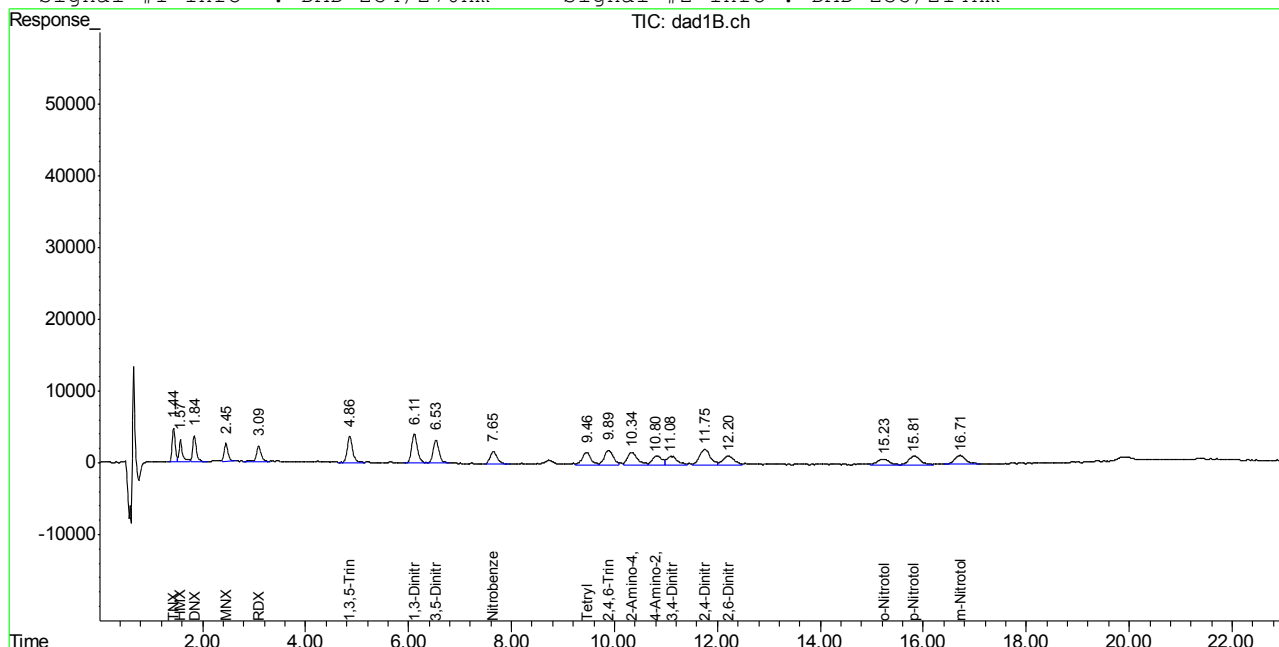
-----  
 (f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.  
 BB053992.D 8330B\_0331PLUS.M Mon Apr 03 07:11:39 2017

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0331BPL\BB053992.D\dad1B.ch Vial: 32  
Signal #2 : C:\HPCHEM\1\DATA\0331BPL\BB053992.D\dad1A.ch  
Acq On : 31-Mar-2017, 11:22:26 Operator: evitam  
Sample : IC1568-50 Inst : G1315B  
Misc : op64321,gbbl568,10.0,,,50,1,water Multiplr: 1.00  
IntFile Signal #1: events.e IntFile Signal #2: events2.e  
Quant Time: Mar 31 15:16 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
Title : Explosives by 8330A,8330B,8332  
Last Update : Fri Mar 31 10:06:47 2017  
Response via : Multiple Level Calibration  
DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm



# Manual Integration Approval Summary

Page 1 of 1

**Sample Number:** GBB1568-IC1568

**Method:** SW846 8330B

**Lab FileID:** BB053992.D

**Analyst approved:** 04/03/17 07:14

**Injection Time:** 03/31/17 11:22

**Supervisor approved:** 04/03/17 08:54

(b) (6)

(b) (6)

Parameter	CAS	Sig#	R.T. (min.)	Reason
TNX		1	1.44	Poorly defined baseline
TNX		2	1.44	Poorly defined baseline
HMX	2691-41-0	1	1.57	Poorly defined baseline
HMX	2691-41-0	2	1.57	Poorly defined baseline
1,3-Dinitrobenzene	99-65-0	1	6.11	Poorly defined baseline
1,3-Dinitrobenzene	99-65-0	2	6.11	Poorly defined baseline
3,5-Dinitroaniline	618-87-1	1	6.53	Poorly defined baseline
3,5-Dinitroaniline	618-87-1	2	6.53	Poorly defined baseline
Nitrobenzene	98-95-3	2	7.65	Poorly defined baseline
Nitroglycerine	55-63-0	2	9.18	Poorly defined baseline
Tetryl	479-45-8	2	9.46	Poorly defined baseline
2,4,6-Trinitrotoluene	118-96-7	2	9.89	Poorly defined baseline
2-amino-4,6-Dinitrotoluene	35572-78-2	2	10.34	Poorly defined baseline
4-amino-2,6-Dinitrotoluene	19406-51-0	2	10.82	Poorly defined baseline
3,4-Dinitrotoluene	610-39-9	2	11.09	Poorly defined baseline
2,4-Dinitrotoluene	121-14-2	2	11.76	Poorly defined baseline
2,6-Dinitrotoluene	606-20-2	2	12.22	Poorly defined baseline
o-Nitrotoluene	88-72-2	2	15.22	Poorly defined baseline
m-Nitrotoluene	99-08-1	2	16.72	Poorly defined baseline
PETN	78-11-5	2	18.77	Poorly defined baseline

9.7.14.1

9



(b) (6)  
04/03/17 08:54

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0331BPL\BB053993.D\dad1B.ch Vial: 33  
 Signal #2 : C:\HPCHEM\1\DATA\0331BPL\BB053993.D\dad1A.ch  
 Acq On : 31-Mar-2017, 11:52:28 Operator: evitam  
 Sample : IC1568-100 Inst : G1315B  
 Misc : op64321, gbb1568, 10.0,,, 50, 1, water Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e  
 Quant Time: Mar 31 12:48:03 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
 Title : Explosives by 8330A, 8330B, 8332  
 Last Update : Fri Mar 31 10:06:47 2017  
 Response via : Initial Calibration  
 DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
 Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
 Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
-----						
System Monitoring Compounds						
15) S 3,4-Dinitrotolue	11.10	11.11	281827	398776	114.783	101.287
Spiked Amount	500.000	Range	70 - 136	Recovery	=	22.96%# 20.26%#
Target Compounds						
1) TNX	1.44	1.44	326370	517067	100.203	99.965
2) HMX	1.57	1.57	193833	574688	104.003	119.841
3) DNx	1.84	1.84	291401	501461	98.954m	104.581
4) MNX	2.45	2.45	242809	366064	106.453	100.756
5) RDX	3.09	3.09	210165	328356	104.375	103.192
6) 1,3,5-Trinitrobe	4.86	4.86	424180	827508	84.114	85.012
7) 1,3-Dinitrobenze	6.12	6.11	561088	392428	98.571	100.610m
8) 3,5-Dinitroanili	6.53	6.53	485294	800989	113.941	112.324m
9) Nitrobenzene	7.65	7.65	329331	324516	96.211	102.443
10) Nitroglycerin	0.00	9.19	0	605725	N.D. d	470.529
11) Tetryl	9.45	9.45	327269	493370	206.404	210.853
12) 2,4,6-Trinitroto	9.89	9.89	427874	461364	193.665	139.471
13) 2-Amino-4,6-Dini	10.33	10.33	375477	486296	107.623	96.165
14) 4-Amino-2,6-Dini	10.83	10.82	272316	467221	109.116	103.299
16) 2,4-Dinitrotolue	11.75	11.75	536792	337692	103.965	106.466
17) 2,6-Dinitrotolue	12.22	12.22	307351	381292	100.200	105.490
18) o-Nitrotoluene	15.21	15.22	230008	319800	93.366	97.637
19) p-Nitrotoluene	15.81	15.82	345285	267228	95.295	98.788
20) m-Nitrotoluene	16.72	16.72	355009	353658	96.800	90.465m
21) PETN	0.00	18.77	0	656630	N.D. d	500.557m

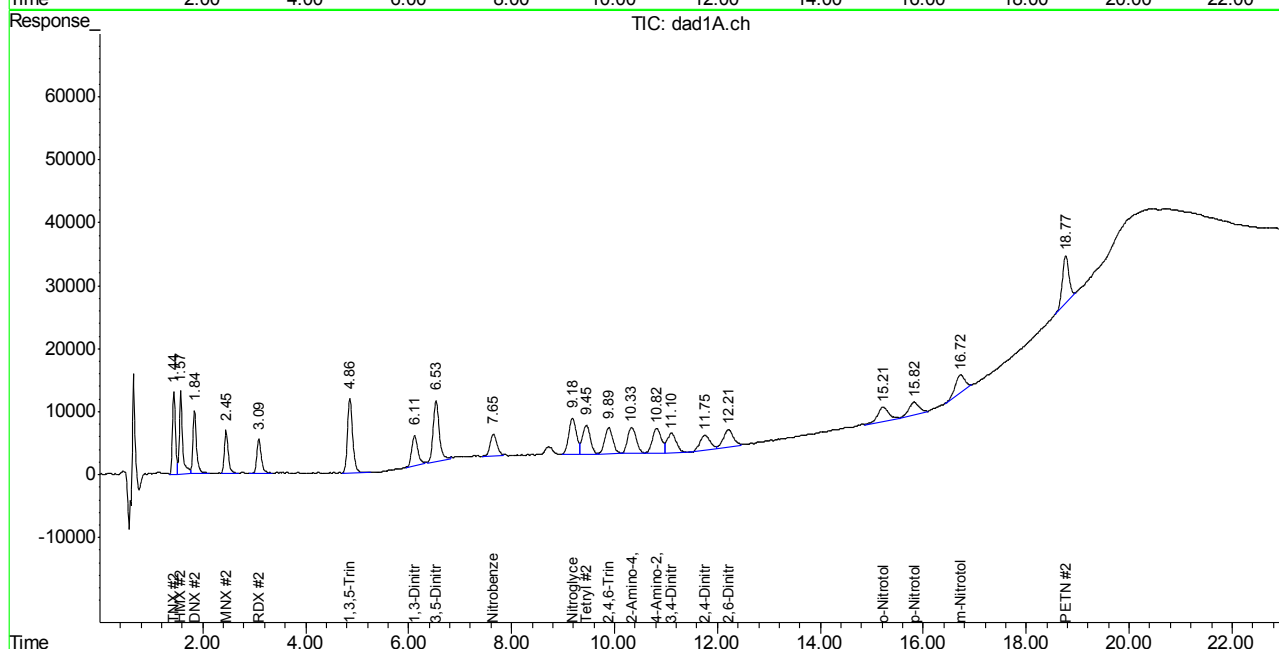
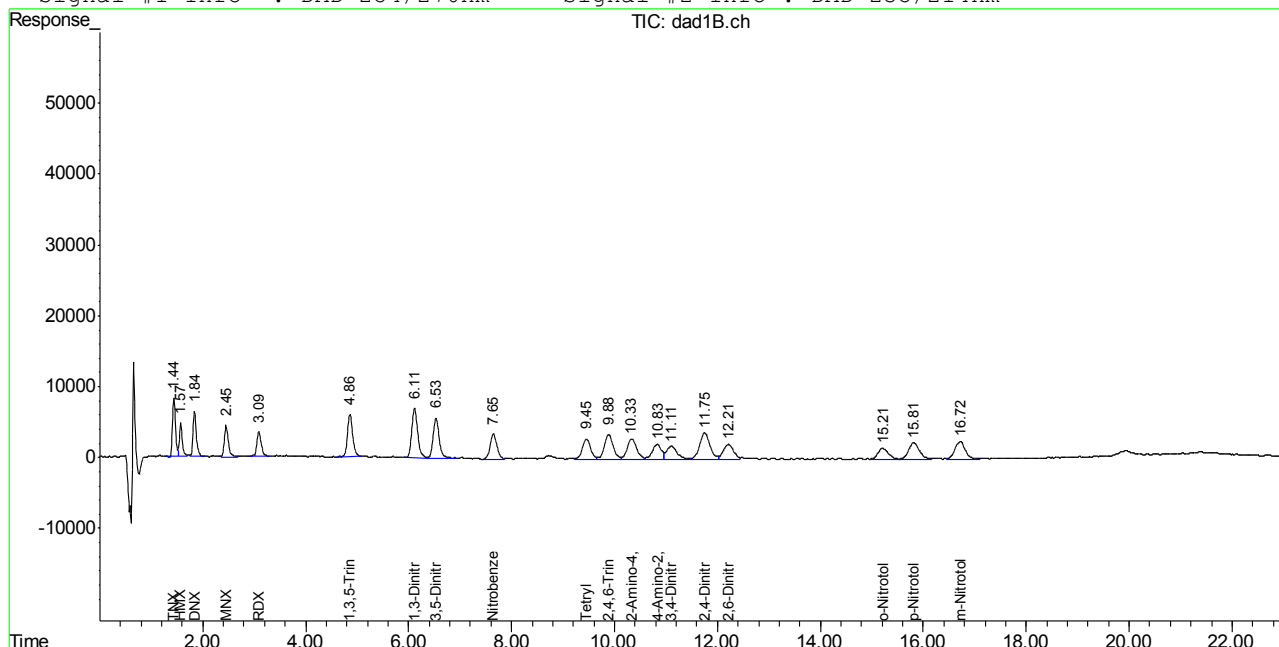
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 (f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.  
 BB053993.D 8330B\_0331PLUS.M Mon Apr 03 07:11:40 2017

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0331BPL\BB053993.D\dad1B.ch Vial: 33  
Signal #2 : C:\HPCHEM\1\DATA\0331BPL\BB053993.D\dad1A.ch  
Acq On : 31-Mar-2017, 11:52:28 Operator: evitam  
Sample : IC1568-100 Inst : G1315B  
Misc : op64321, gbb1568, 10.0, , , 50, 1, water Multiplr: 1.00  
IntFile Signal #1: events.e IntFile Signal #2: events2.e  
Quant Time: Mar 31 15:17 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
Title : Explosives by 8330A, 8330B, 8332  
Last Update : Fri Mar 31 10:06:47 2017  
Response via : Multiple Level Calibration  
DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm



# Manual Integration Approval Summary

Page 1 of 1

**Sample Number:** GBB1568-IC1568

**Method:** SW846 8330B

**Lab FileID:** BB053993.D

**Analyst approved:** 04/03/17 07:14

**Injection Time:** 03/31/17 11:52

**Supervisor approved:** 04/03/17 08:54

(b) (6)

(b) (6)

Parameter	CAS	Sig#	R.T. (min.)	Reason
DNX		1	1.84	Poorly defined baseline
1,3-Dinitrobenzene	99-65-0	2	6.11	Poorly defined baseline
3,5-Dinitroaniline	618-87-1	2	6.53	Poorly defined baseline
m-Nitrotoluene	99-08-1	2	16.72	Poorly defined baseline
PETN	78-11-5	2	18.77	Poorly defined baseline

9.7.15.1

9

(b) (6)

04/03/17 08:54

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0331BPL\BB053994.D\dad1B.ch Vial: 34  
 Signal #2 : C:\HPCHEM\1\DATA\0331BPL\BB053994.D\dad1A.ch  
 Acq On : 31-Mar-2017, 12:22:25 Operator: evitam  
 Sample : IC1568-200 Inst : G1315B  
 Misc : op64321,gbbl568,10.0,,,50,1,water Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e  
 Quant Time: Mar 31 12:48:04 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
 Title : Explosives by 8330A,8330B,8332  
 Last Update : Fri Mar 31 10:06:47 2017  
 Response via : Initial Calibration  
 DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
 Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
 Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
-----						
System Monitoring Compounds						
15) S 3,4-Dinitrotolue	11.11	11.11	508004	824663	206.900	208.675
Spiked Amount	500.000	Range	70 - 136	Recovery	=	41.38%# 41.73%#
Target Compounds						
1) TNX	1.44	1.44	668026	1056727	205.100	204.298
2) HMX	1.57	1.57	374227	1108748	200.796	230.806
3) DNx	1.84	1.84	593311	1013225	201.476	211.311
4) MNX	2.45	2.45	482590	745055	211.578	205.069
5) RDX	3.09	3.09	409003	645535	203.126	202.872
6) 1,3,5-Trinitrobe	4.86	4.86	835012	1659117	165.581	170.444
7) 1,3-Dinitrobenze	6.11	6.11	1117701	779231	196.356	199.778m
8) 3,5-Dinitroanili	6.53	6.53	952119	1608037	223.440	224.673m
9) Nitrobenzene	7.65	7.65	659365	637305	192.627	201.184m
10) Nitroglycerin	0.00	9.18	0	1222376	N.D. d	949.547m
11) Tetryl	9.45	9.45	639754	1004118	403.485	429.134m
12) 2,4,6-Trinitroto	9.89	9.89	802658	920637	363.301	278.310m
13) 2-Amino-4,6-Dini	10.34	10.34	727627	1032695	208.560	204.215m
14) 4-Amino-2,6-Dini	10.82	10.82	508236	1017484	203.649	224.958
16) 2,4-Dinitrotolue	11.76	11.75	1025427	651321	198.603	205.345
17) 2,6-Dinitrotolue	12.22	12.22	591928	737916	192.976	204.155
18) o-Nitrotoluene	15.22	15.22	465752	603148	189.061	184.145
19) p-Nitrotoluene	15.82	15.83	704474	529330	194.428	195.682
20) m-Nitrotoluene	16.72	16.72	695846	782303	189.735	200.111m
21) PETN	0.00	18.77	0	1421204	N.D. d	1083.402m

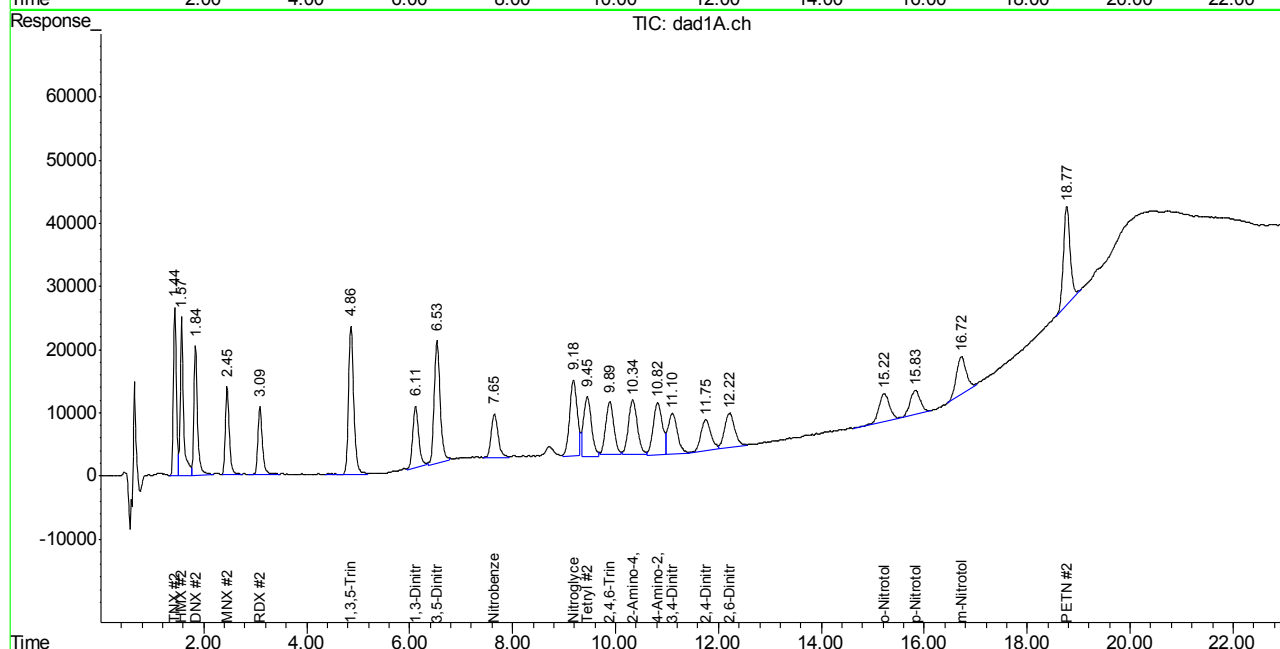
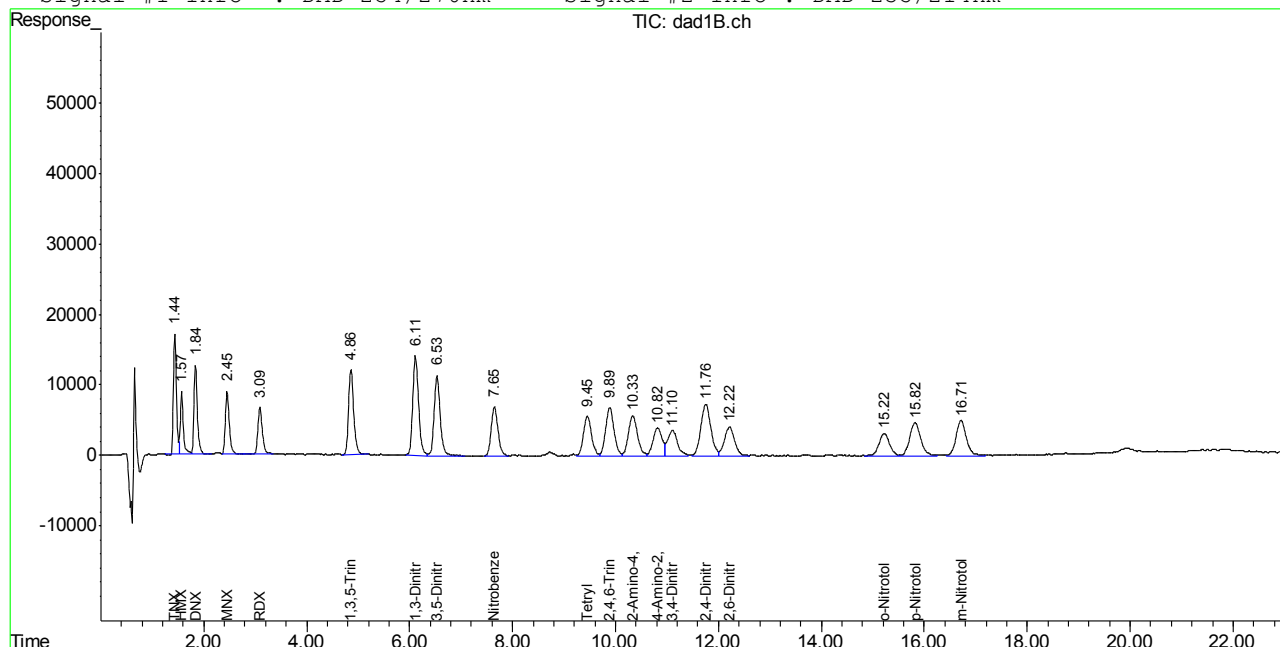
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.  
 BB053994.D 8330B\_0331PLUS.M Mon Apr 03 07:11:41 2017

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0331BPL\BB053994.D\dad1B.ch Vial: 34  
Signal #2 : C:\HPCHEM\1\DATA\0331BPL\BB053994.D\dad1A.ch  
Acq On : 31-Mar-2017, 12:22:25 Operator: evitam  
Sample : IC1568-200 Inst : G1315B  
Misc : op64321, gbb1568, 10.0, , , 50, 1, water Multiplr: 1.00  
IntFile Signal #1: events.e IntFile Signal #2: events2.e  
Quant Time: Mar 31 15:19 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
Title : Explosives by 8330A, 8330B, 8332  
Last Update : Fri Mar 31 10:06:47 2017  
Response via : Multiple Level Calibration  
DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm



# Manual Integration Approval Summary

Page 1 of 1

**Sample Number:** GBB1568-IC1568

**Method:** SW846 8330B

**Lab FileID:** BB053994.D

**Analyst approved:** 04/03/17 07:14

**Injection Time:** 03/31/17 12:22

**Supervisor approved:** 04/03/17 08:54

(b) (6)

(b) (6)

Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3-Dinitrobenzene	99-65-0	2	6.11	Poorly defined baseline
3,5-Dinitroaniline	618-87-1	2	6.53	Poorly defined baseline
Nitrobenzene	98-95-3	2	7.65	Poorly defined baseline
Nitroglycerine	55-63-0	2	9.18	Poorly defined baseline
Tetryl	479-45-8	2	9.45	Poorly defined baseline
2,4,6-Trinitrotoluene	118-96-7	2	9.89	Poorly defined baseline
2-amino-4,6-Dinitrotoluene	35572-78-2	2	10.34	Poorly defined baseline
m-Nitrotoluene	99-08-1	2	16.72	Poorly defined baseline
PETN	78-11-5	2	18.77	Poorly defined baseline

9.7.16.1

9

(b) (6)  
04/03/17 08:54

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0331BPL\BB053995.D\dad1B.ch Vial: 35  
 Signal #2 : C:\HPCHEM\1\DATA\0331BPL\BB053995.D\dad1A.ch  
 Acq On : 31-Mar-2017, 12:52:24 Operator: evitam  
 Sample : ICC1568-500 Inst : G1315B  
 Misc : op64321, gbb1568, 10.0,,, 50, 1, water Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e  
 Quant Time: Mar 31 13:39:38 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
 Title : Explosives by 8330A, 8330B, 8332  
 Last Update : Fri Mar 31 10:06:47 2017  
 Response via : Initial Calibration  
 DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
 Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
 Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
-----						
System Monitoring Compounds						
15) S 3,4-Dinitrotolue	11.12	11.12	1162402	1986092	473.424	497.546
Spiked Amount	500.000	Range	70 - 136	Recovery	=	94.68% 99.51%
Target Compounds						
1) TNX	1.44	1.44	1638098	2527409	502.935	488.625
2) HMX	1.57	1.57	839131	2336878	450.246	484.526
3) DNx	1.84	1.84	1422215	2295175	482.955	478.666
4) MNX	2.46	2.46	1152204	1799195	505.152	495.212
5) RDX	3.09	3.09	971176	1513284	482.321	475.579
6) 1,3,5-Trinitrobe	4.86	4.86	2005402	3904865	397.667	401.155
7) 1,3-Dinitrobenze	6.12	6.11	2710475	1865081	476.173	478.166m
8) 3,5-Dinitroanili	6.53	6.53	2210442	3672570	518.074	508.431m
9) Nitrobenzene	7.65	7.65	1208891	1136626	353.166	358.809m
10) Nitroglycerin	0.00	9.19	0	3007716	N.D. d	2336.405
11) Tetryl	9.46	9.46	1473273	2420730	929.175	1034.557
12) 2,4,6-Trinitroto	9.89	9.90	1905123	2283923	862.301	690.433
13) 2-Amino-4,6-Dini	10.35	10.34	1676041	2477499	480.404	489.924
14) 4-Amino-2,6-Dini	10.83	10.83	1199200	2383894	480.515	527.061
16) 2,4-Dinitrotolue	11.76	11.76	2432891	1595584	471.198	503.048
17) 2,6-Dinitrotolue	12.22	12.23	1410649	1790342	459.889	495.324
18) o-Nitrotoluene	15.22	15.23	798528	1077765	324.144m	329.049m
19) p-Nitrotoluene	15.83	15.83	1368498	1069020	377.692	395.194
20) m-Nitrotoluene	16.72	16.72	1252709	1480544	341.574	378.719m
21) PETN	0.00	18.77	0	3251017	N.D. d	2478.290m

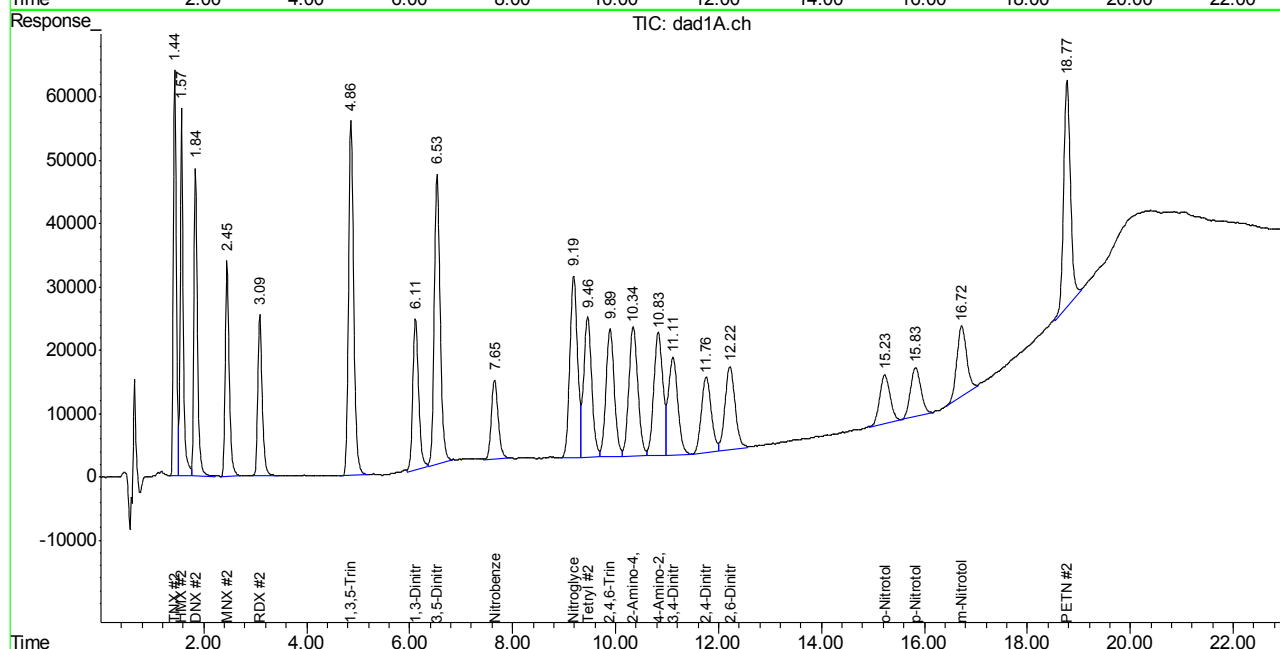
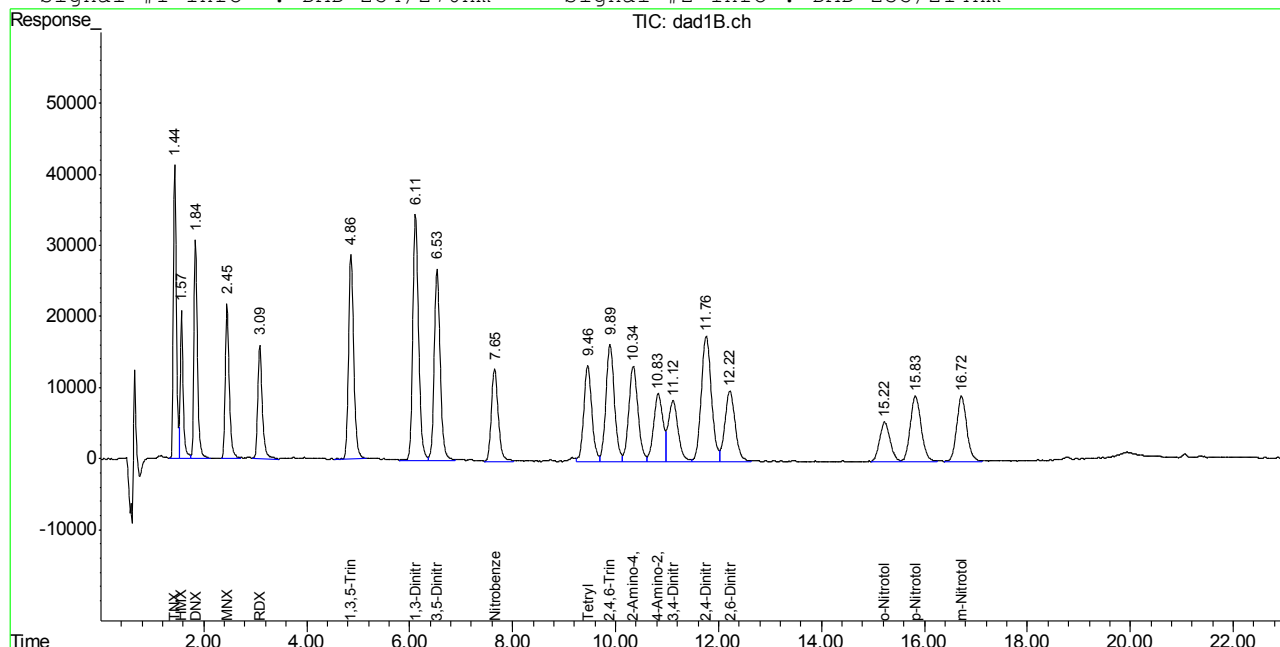
-----  
 (f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.  
 BB053995.D 8330B\_0331PLUS.M Mon Apr 03 07:11:42 2017

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0331BPL\BB053995.D\dad1B.ch Vial: 35  
Signal #2 : C:\HPCHEM\1\DATA\0331BPL\BB053995.D\dad1A.ch  
Acq On : 31-Mar-2017, 12:52:24 Operator: evitam  
Sample : ICC1568-500 Inst : G1315B  
Misc : op64321, gbb1568, 10.0, , , 50, 1, water Multiplr: 1.00  
IntFile Signal #1: events.e IntFile Signal #2: events2.e  
Quant Time: Mar 31 15:27 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
Title : Explosives by 8330A, 8330B, 8332  
Last Update : Fri Mar 31 10:06:47 2017  
Response via : Multiple Level Calibration  
DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm





# Manual Integration Approval Summary

Page 1 of 1

**Sample Number:** GBB1568-ICC1568

**Method:** SW846 8330B

**Lab FileID:** BB053995.D

**Analyst approved:** 04/03/17 07:14

**Injection Time:** 03/31/17 12:52

**Supervisor approved:** 04/03/17 08:54

(b) (6)

(b) (6)

Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3-Dinitrobenzene	99-65-0	2	6.11	Poorly defined baseline
3,5-Dinitroaniline	618-87-1	2	6.53	Poorly defined baseline
Nitrobenzene	98-95-3	2	7.65	Poorly defined baseline
o-Nitrotoluene	88-72-2	1	15.22	Poorly defined baseline
o-Nitrotoluene	88-72-2	2	15.23	Poorly defined baseline
m-Nitrotoluene	99-08-1	2	16.72	Poorly defined baseline
PETN	78-11-5	2	18.77	Poorly defined baseline

9.7.17.1

9

(b) (6)  
04/03/17 08:54

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0331BPL\BB053996.D\dad1B.ch Vial: 36  
 Signal #2 : C:\HPCHEM\1\DATA\0331BPL\BB053996.D\dad1A.ch  
 Acq On : 31-Mar-2017, 13:22:21 Operator: evitam  
 Sample : IC1568-1000 Inst : G1315B  
 Misc : op64321, gbb1568, 10.0,,, 50, 1, water Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e  
 Quant Time: Mar 31 13:55:34 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
 Title : Explosives by 8330A, 8330B, 8332  
 Last Update : Fri Mar 31 10:06:47 2017  
 Response via : Initial Calibration  
 DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
 Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
 Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
-----						
System Monitoring Compounds						
15) S 3,4-Dinitrotolue	11.12	11.12	2259090	3956832	920.084	975.143
Spiked Amount	500.000	Range	70 - 136	Recovery	=	184.02%# 195.03%#
Target Compounds						
1) TNX	1.44	1.44	3271849	5042887	1004.535	974.944
2) HMX	1.57	1.57	1650925	4566445	885.824	940.084
3) DNx	1.84	1.84	2835211	4543538	962.779	947.569
4) MNX	2.46	2.46	2315531	3567980	1015.179	982.054
5) RDX	3.09	3.09	1845354	2958085	916.470	929.635
6) 1,3,5-Trinitrobe	4.86	4.86	3957150	7766647	784.695	797.884
7) 1,3-Dinitrobenze	6.12	6.12	5345910	3714715	939.163	952.371
8) 3,5-Dinitroanili	6.53	6.53	4331989	7335824	1013.136	999.733m
9) Nitrobenzene	7.65	7.65	3094422	2965837	904.005	936.252
10) Nitroglycerin	0.00	9.19	0	6020239	N.D. d	4676.545
11) Tetryl	9.46	9.46	2907673	4826928	1833.833	2062.903
12) 2,4,6-Trinitroto	9.90	9.90	3750071	4553011	1697.366	1376.382
13) 2-Amino-4,6-Dini	10.34	10.34	3316844	4949569	950.707	978.774
14) 4-Amino-2,6-Dini	10.83	10.83	2368236	4781401	948.945	1057.131
16) 2,4-Dinitrotolue	11.76	11.76	4850267	3168565	939.391	998.969
17) 2,6-Dinitrotolue	12.23	12.23	2780770	3572668	906.565	988.430
18) o-Nitrotoluene	15.23	15.23	2172472	2951557	881.864	901.132
19) p-Nitrotoluene	15.82	15.82	3375926	2759352	931.724	1020.075
20) m-Nitrotoluene	16.72	16.72	3268975	3868508	891.345	989.553m
21) PETN	0.00	18.77	0	6596406	N.D. d	5028.523m

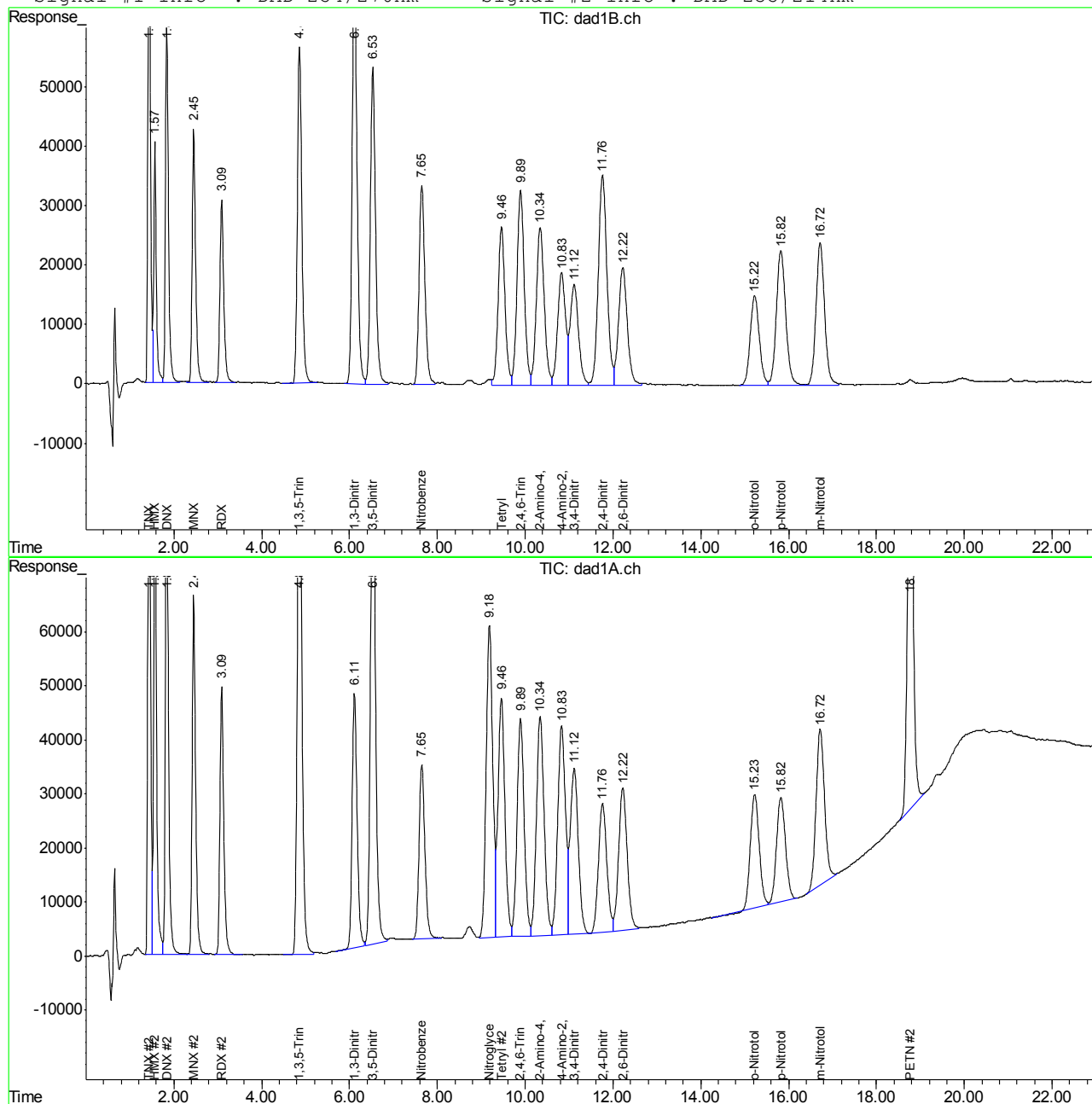
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 (f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.  
 BB053996.D 8330B\_0331PLUS.M Mon Apr 03 07:11:43 2017

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0331BPL\BB053996.D\dad1B.ch Vial: 36  
Signal #2 : C:\HPCHEM\1\DATA\0331BPL\BB053996.D\dad1A.ch  
Acq On : 31-Mar-2017, 13:22:21 Operator: evitam  
Sample : IC1568-1000 Inst : G1315B  
Misc : op64321, gbb1568, 10.0,,, 50, 1, water Multiplr: 1.00  
IntFile Signal #1: events.e IntFile Signal #2: events2.e  
Quant Time: Mar 31 15:28 2017 Quant Results File: 8330B\_0324PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0324PLUS.M (Chemstation Integrator)  
Title : Explosives by 8330A, 8330B, 8332  
Last Update : Fri Mar 31 10:06:47 2017  
Response via : Multiple Level Calibration  
DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm



# Manual Integration Approval Summary

Page 1 of 1

**Sample Number:** GBB1568-IC1568      **Method:** SW846 8330B  
**Lab FileID:** BB053996.D      **Analyst approved:** 04/03/17 07:14  
**Injection Time:** 03/31/17 13:22      **Supervisor approved:** 04/03/17 08:54

(b) (6)  
(b) (6)

Parameter	CAS	Sig#	R.T. (min.)	Reason
3,5-Dinitroaniline	618-87-1	2	6.53	Poorly defined baseline
m-Nitrotoluene	99-08-1	2	16.72	Poorly defined baseline
PETN	78-11-5	2	18.77	Poorly defined baseline

9.7.18.1

9

(b) (6)  
04/03/17 08:54

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0331BPL\BB053998.D\dad1B.ch Vial: 38  
Signal #2 : C:\HPCHEM\1\DATA\0331BPL\BB053998.D\dad1A.ch  
Acq On : 31-Mar-2017, 14:22:19 Operator: evitam  
Sample : ICV1568-500 Inst : G1315B  
Misc : op64321, gbb1568, 10.0,,, 50, 1, water Multiplr: 1.00  
IntFile Signal #1: events.e IntFile Signal #2: events2.e  
Quant Time: Apr 03 06:58:35 2017 Quant Results File: 8330B\_0331PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0331PLUS.M (Chemstation Integrator)  
Title : Explosives by 8330A, 8330B, 8332  
Last Update : Fri Mar 31 15:52:11 2017  
Response via : Initial Calibration  
DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
-----						
System Monitoring Compounds						
15) S 3,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D.
Spiked Amount	500.000	Range	70 - 136	Recovery	=	0.00%# 0.00%#
Target Compounds						
1) TNX	1.44	1.44	1644603	2537373	500.879	493.502
2) HMX	1.57	1.57	900611	2521857	520.881	515.772
3) DNx	1.84	1.84	1425957	2310879	496.332	444.947
4) MNX	2.45	2.45	1163972	1817236	502.461	499.123
5) RDX	3.09	3.09	931101	1502724	432.540	442.504
6) 1,3,5-Trinitrobe	4.86	4.86	1996997	3844785	452.180	443.444
7) 1,3-Dinitrobenze	6.11	6.11	2434440	1695995	425.847m	435.557m
8) 3,5-Dinitroanili	6.53	6.53	2126697	3579061	437.349m	446.650m
9) Nitrobenzene	7.65	7.64	1551756	1513638	477.350	496.419m
10) Nitroglycerin	0.00	9.19	0	3241413	N.D. d	2644.337m
11) Tetryl	9.46	9.46	1383895	2265603	431.831	436.446m
12) 2,4,6-Trinitroto	0.00	0.00	0	0	N.D. d	N.D. d
13) 2-Amino-4,6-Dini	10.34	10.34	1678834	2557691	489.433	511.725m
14) 4-Amino-2,6-Dini	10.83	10.83	1294146	2539201	480.327	501.799
16) 2,4-Dinitrotolue	11.76	11.77	2319048	1526218	439.869	467.234
17) 2,6-Dinitrotolue	12.22	12.23	1367395	1761704	451.778	466.538
18) o-Nitrotoluene	15.23	15.23	1120204	1476085	489.468	579.632m
19) p-Nitrotoluene	15.82	15.83	1665166	1322160	495.686	541.212
20) m-Nitrotoluene	16.72	16.72	1638504	1867631	566.949	506.586m
21) PETN	0.00	18.77	0	3679541	N.D. d	2719.699m

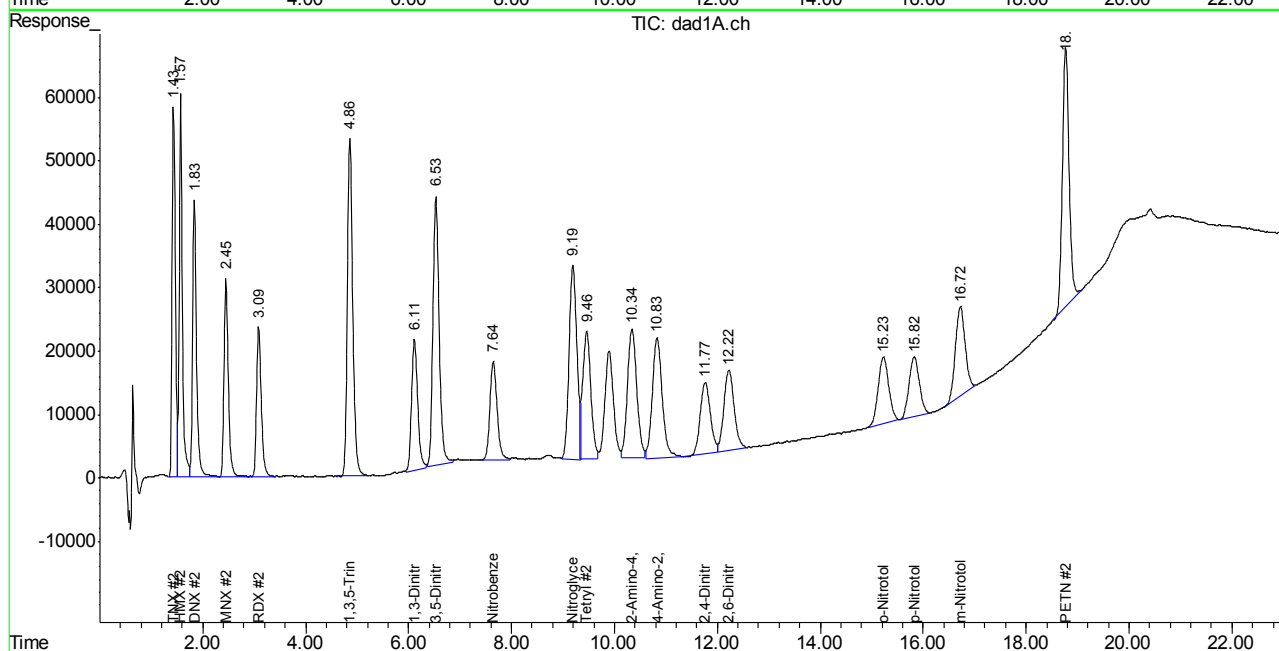
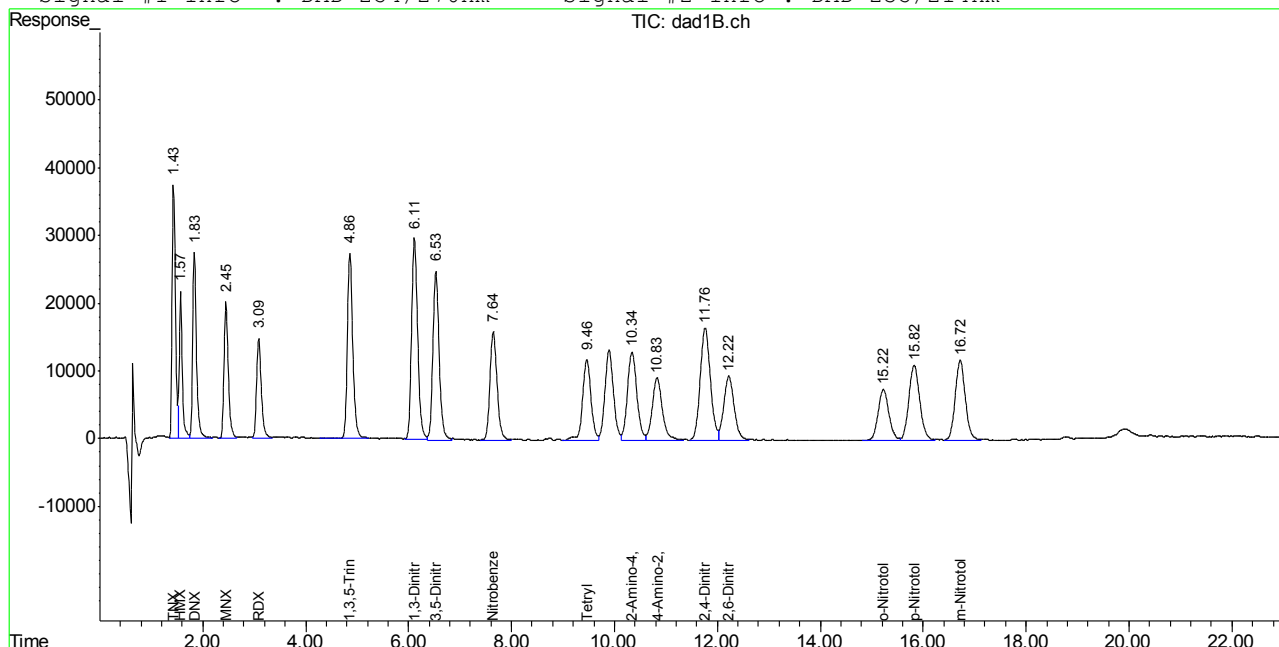
-----  
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.  
BB053998.D 8330B\_0331PLUS.M Mon Apr 03 08:51:51 2017

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0331BPL\BB053998.D\dad1B.ch Vial: 38  
Signal #2 : C:\HPCHEM\1\DATA\0331BPL\BB053998.D\dad1A.ch  
Acq On : 31-Mar-2017, 14:22:19 Operator: evitam  
Sample : ICV1568-500 Inst : G1315B  
Misc : op64321, gbb1568, 10.0, , , 50, 1, water Multiplr: 1.00  
IntFile Signal #1: events.e IntFile Signal #2: events2.e  
Quant Time: Apr 3 8:51 2017 Quant Results File: 8330B\_0331PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0331PLUS.M (Chemstation Integrator)  
Title : Explosives by 8330A, 8330B, 8332  
Last Update : Fri Mar 31 15:52:11 2017  
Response via : Multiple Level Calibration  
DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm



# Manual Integration Approval Summary

Page 1 of 1

**Sample Number:** GBB1568-ICV1568

**Method:** SW846 8330B

**Lab FileID:** BB053998.D

**Analyst approved:** 04/03/17 07:14

**Injection Time:** 03/31/17 14:22

**Supervisor approved:** 04/03/17 08:54

(b) (6)

(b) (6)

Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3-Dinitrobenzene	99-65-0	1	6.11	Poorly defined baseline
1,3-Dinitrobenzene	99-65-0	2	6.11	Poorly defined baseline
3,5-Dinitroaniline	618-87-1	1	6.53	Poorly defined baseline
3,5-Dinitroaniline	618-87-1	2	6.53	Poorly defined baseline
Nitrobenzene	98-95-3	2	7.64	Poorly defined baseline
Nitroglycerine	55-63-0	2	9.19	Poorly defined baseline
Tetryl	479-45-8	2	9.46	Poorly defined baseline
2,4,6-Trinitrotoluene	118-96-7	2	9.89	Poorly defined baseline
2-amino-4,6-Dinitrotoluene	35572-78-2	2	10.34	Poorly defined baseline
o-Nitrotoluene	88-72-2	2	15.23	Poorly defined baseline
m-Nitrotoluene	99-08-1	2	16.72	Poorly defined baseline
PETN	78-11-5	2	18.77	Poorly defined baseline

9.7.19.1

9

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0331BPL\BB053999.D\dad1B.ch Vial: 39  
 Signal #2 : C:\HPCHEM\1\DATA\0331BPL\BB053999.D\dad1A.ch  
 Acq On : 31-Mar-2017, 14:52:20 Operator: evitam  
 Sample : ICV1568-500,B Inst : G1315B  
 Misc : op64321,gb1568,10.0,,,50,1,water Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e  
 Quant Time: Apr 03 08:50:21 2017 Quant Results File: 8330B\_0331PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0331PLUS.M (Chemstation Integrator)  
 Title : Explosives by 8330A,8330B,8332  
 Last Update : Fri Mar 31 15:52:11 2017  
 Response via : Initial Calibration  
 DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
 Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
 Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
-----						
System Monitoring Compounds						
15) S 3,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
Spiked Amount	500.000	Range	70 - 136	Recovery	=	0.00%# 0.00%#
Target Compounds						
1) TNX	0.00	0.00	0	0	N.D. d	N.D. d
2) HMX	0.00	0.00	0	0	N.D. d	N.D. d
3) DNX	0.00	0.00	0	0	N.D. d	N.D. d
4) MNX	0.00	0.00	0	0	N.D. d	N.D. d
5) RDX	0.00	0.00	0	0	N.D. d	N.D. d
6) 1,3,5-Trinitrobe	0.00	0.00	0	0	N.D. d	N.D. d
7) 1,3-Dinitrobenze	0.00	0.00	0	0	N.D. d	N.D. d
8) 3,5-Dinitroanili	0.00	0.00	0	0	N.D. d	N.D. d
9) Nitrobenzene	0.00	0.00	0	0	N.D. d	N.D. d
10) Nitroglycerin	0.00	0.00	0	0	N.D. d	N.D. d
11) Tetryl	0.00	0.00	0	0	N.D. d	N.D. d
12) 2,4,6-Trinitroto	9.89	9.89	1721270	2301950	415.731	479.242
13) 2-Amino-4,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
14) 4-Amino-2,6-Dini	0.00	0.00	0	0	N.D. d	N.D. d
16) 2,4-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
17) 2,6-Dinitrotolue	0.00	0.00	0	0	N.D. d	N.D. d
18) o-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
19) p-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
20) m-Nitrotoluene	0.00	0.00	0	0	N.D. d	N.D. d
21) PETN	18.71	0.00	4938	0	NoCal	N.D.

-----  
 (f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.  
 BB053999.D 8330B\_0331PLUS.M Mon Apr 03 08:51:06 2017

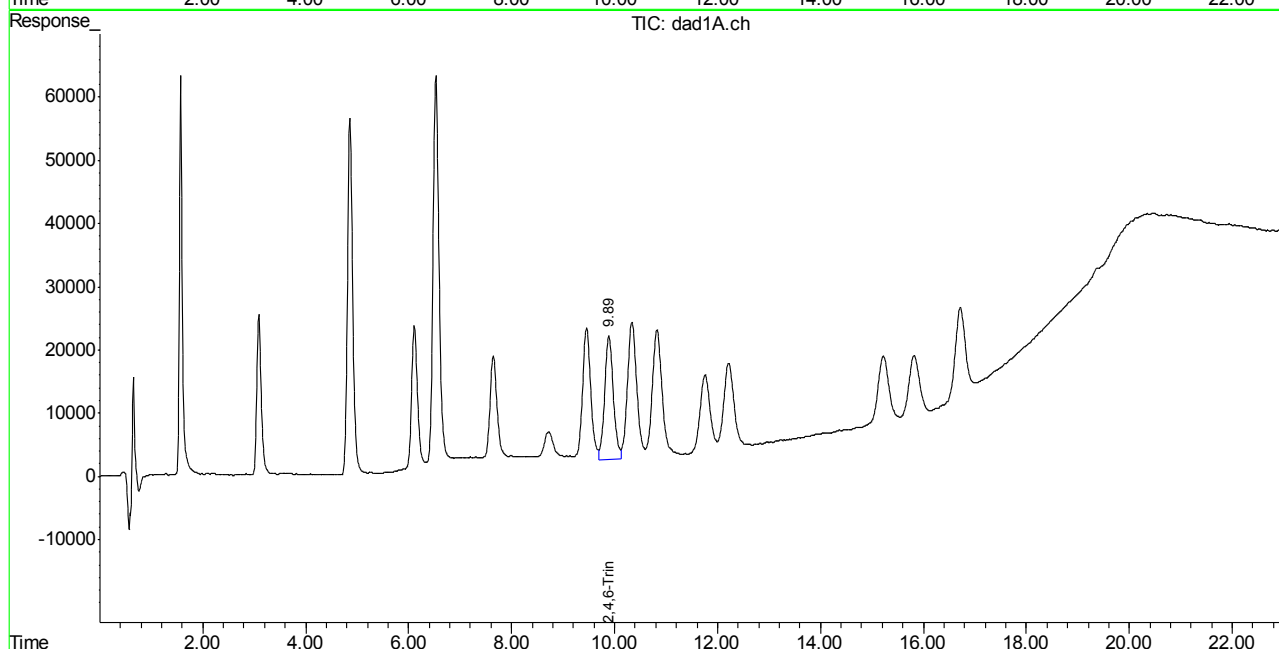
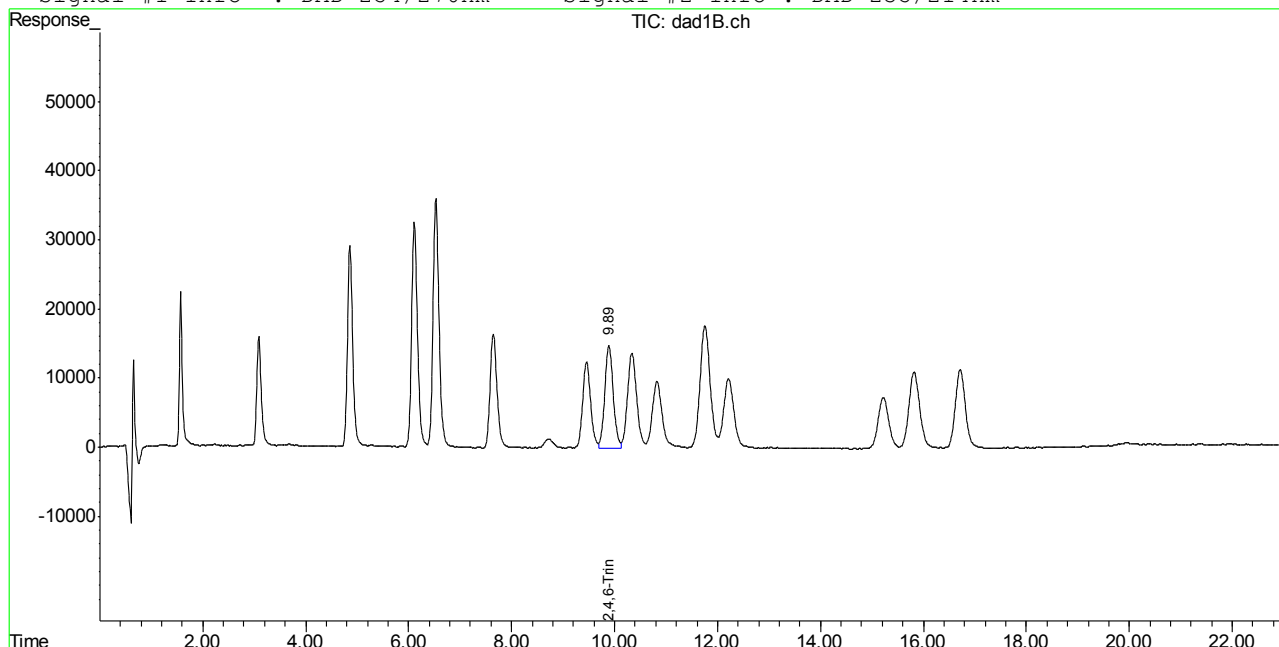


## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0331BPL\BB053999.D\dad1B.ch Vial: 39  
Signal #2 : C:\HPCHEM\1\DATA\0331BPL\BB053999.D\dad1A.ch  
Acq On : 31-Mar-2017, 14:52:20 Operator: evitam  
Sample : ICV1568-500,B Inst : G1315B  
Misc : op64321,gbbl568,10.0,,,50,1,water Multiplr: 1.00  
IntFile Signal #1: events.e IntFile Signal #2: events2.e  
Quant Time: Apr 3 8:50 2017 Quant Results File: 8330B\_0331PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0331PLUS.M (Chemstation Integrator)  
Title : Explosives by 8330A,8330B,8332  
Last Update : Fri Mar 31 15:52:11 2017  
Response via : Multiple Level Calibration  
DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm



(b) (6)  
04/03/17 18:47

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0403BPL\BB054003.D\dad1B.ch Vial: 2  
 Signal #2 : C:\HPCHEM\1\DATA\0403BPL\BB054003.D\dad1A.ch  
 Acq On : 03-Apr-2017, 08:40:52 Operator: evitam  
 Sample : cc1568-1000,b Inst : G1315B  
 Misc : op64321,gb1569,10.0,,,50,1,water Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e  
 Quant Time: Apr 03 09:19:43 2017 Quant Results File: 8330B\_0331PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0331PLUS.M (Chemstation Integrator)  
 Title : Explosives by 8330A,8330B,8332  
 Last Update : Fri Mar 31 15:52:11 2017  
 Response via : Initial Calibration  
 DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
 Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
 Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
-----						
System Monitoring Compounds						
15) S 3,4-Dinitrotolue	11.07	11.07	2252455	4006162	1000.014	983.129
Spiked Amount	500.000	Range	70 - 136	Recovery	= 200.00%#	196.63%#
Target Compounds						
1) TNX	1.44	1.44	3286328	5099338	1000.882	991.786
2) HMX	1.57	1.57	1640742	4522507	997.044	994.774
3) DNx	1.84	1.84	2872120	4560427	1014.472	878.086
4) MNX	2.45	2.45	2352341	3667972	1015.454	1007.448
5) RDX	3.09	3.09	1875562	2999747	871.287	883.329
6) 1,3,5-Trinitrobe	4.85	4.85	4033402	7904955	913.283	911.729
7) 1,3-Dinitrobenze	6.10	6.10	5369697	3709136	939.300	952.561m
8) 3,5-Dinitroanili	6.52	6.52	4454104	7520190	915.974	938.485m
9) Nitrobenzene	7.63	7.63	3231523	3114705	994.079	1021.512m
10) Nitroglycerin	0.00	9.15	0	5806485	N.D. d	4736.918m
11) Tetryl	9.43	9.42	3067118	4970923	957.066	957.598m
12) 2,4,6-Trinitroto	9.85	9.85	3799352	4576278	917.642	952.733m
13) 2-Amino-4,6-Dini	10.31	10.30	3382240	5150852	1023.929	1042.603m
14) 4-Amino-2,6-Dini	10.79	10.79	2414848	4982392	896.280	984.624
16) 2,4-Dinitrotolue	11.72	11.72	4834961	3190143	917.080	976.626
17) 2,6-Dinitrotolue	12.18	12.18	2757404	3571459	911.026	945.801
18) o-Nitrotoluene	15.19	15.19	2250113	3104627	983.177	1048.175m
19) p-Nitrotoluene	15.78	15.78	3474336	2894825	1034.239	1184.965
20) m-Nitrotoluene	16.68	16.68	3395901	3979671	1039.364	1079.467m
21) PETN	0.00	18.74	0	6910557	N.D. d	5107.875m

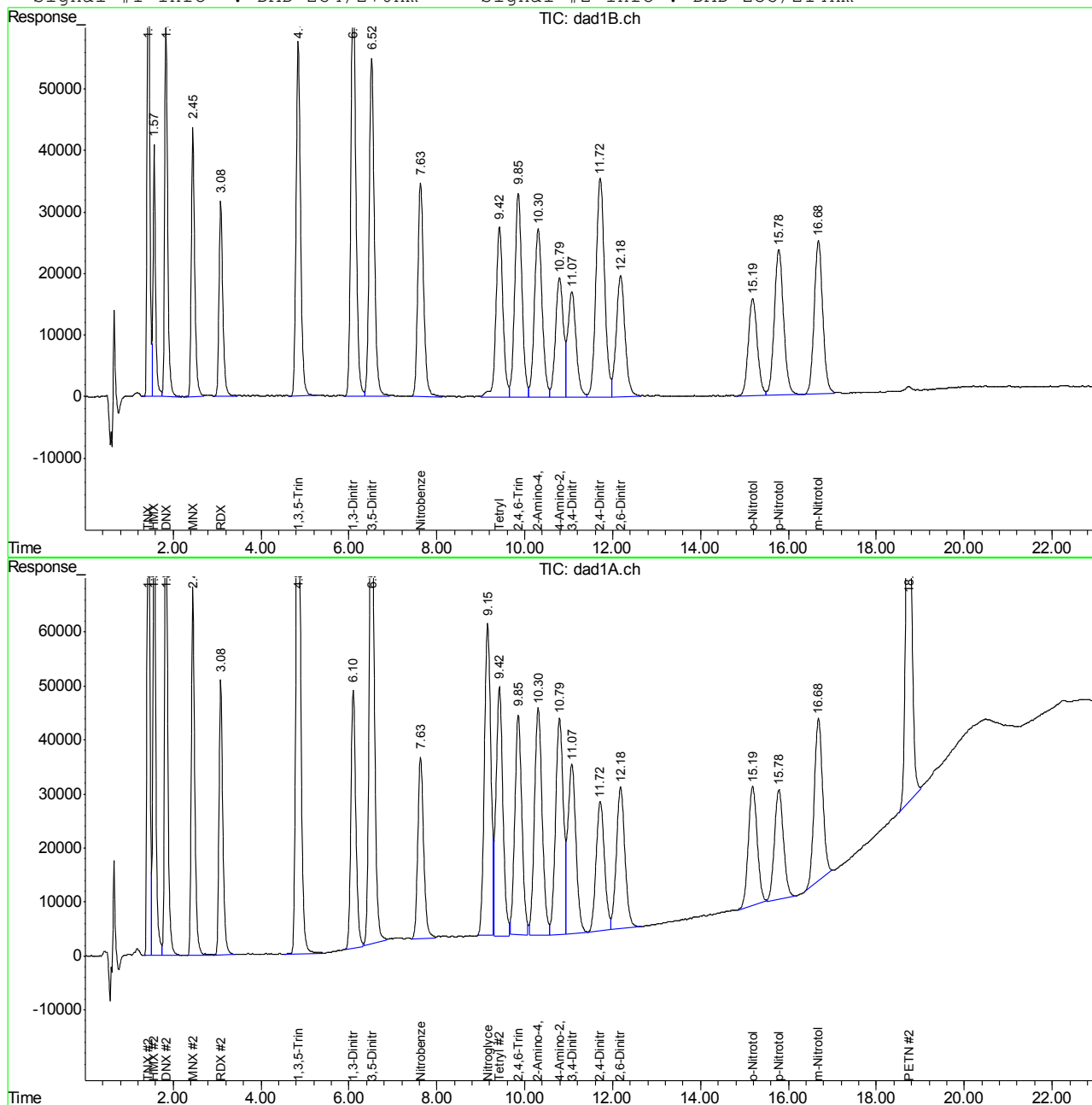
-----  
 (f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.  
 BB054003.D 8330B\_0331PLUS.M Mon Apr 03 13:03:42 2017

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0403BPL\BB054003.D\dad1B.ch Vial: 2  
Signal #2 : C:\HPCHEM\1\DATA\0403BPL\BB054003.D\dad1A.ch  
Acq On : 03-Apr-2017, 08:40:52 Operator: evitam  
Sample : cc1568-1000,b Inst : G1315B  
Misc : op64321,gbbl569,10.0,,,50,1,water Multiplr: 1.00  
IntFile Signal #1: events.e IntFile Signal #2: events2.e  
Quant Time: Apr 3 13:03 2017 Quant Results File: 8330B\_0331PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0331PLUS.M (Chemstation Integrator)  
Title : Explosives by 8330A,8330B,8332  
Last Update : Fri Mar 31 15:52:11 2017  
Response via : Multiple Level Calibration  
DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm



# Manual Integration Approval Summary

Page 1 of 1

**Sample Number:** GBB1569-CC1568

**Method:** SW846 8330B

**Lab FileID:** BB054003.D

**Analyst approved:** 04/03/17 13:04

**Injection Time:** 04/03/17 08:40

**Supervisor approved:** 04/03/17 18:47

(b) (6)

(b) (6)

Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3-Dinitrobenzene	99-65-0	2	6.10	Poorly defined baseline
3,5-Dinitroaniline	618-87-1	2	6.52	Poorly defined baseline
Nitrobenzene	98-95-3	2	7.63	Poorly defined baseline
Nitroglycerine	55-63-0	2	9.15	Poorly defined baseline
Tetryl	479-45-8	2	9.42	Poorly defined baseline
2,4,6-Trinitrotoluene	118-96-7	2	9.85	Poorly defined baseline
2-amino-4,6-Dinitrotoluene	35572-78-2	2	10.30	Poorly defined baseline
o-Nitrotoluene	88-72-2	2	15.19	Poorly defined baseline
m-Nitrotoluene	99-08-1	2	16.68	Poorly defined baseline
PETN	78-11-5	2	18.74	Poorly defined baseline

9.7.21.1

9

(b) (6)  
04/03/17 18:47

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0403BPL\BB054009.D\dad1B.ch Vial: 2  
 Signal #2 : C:\HPCHEM\1\DATA\0403BPL\BB054009.D\dad1A.ch  
 Acq On : 03-Apr-2017, 11:52:12 Operator: evitam  
 Sample : CC1568-1000 Inst : G1315B  
 Misc : op64396, gbb1569, 10.0,,,50,1,SOIL Multiplr: 1.00  
 IntFile Signal #1: events.e IntFile Signal #2: events2.e  
 Quant Time: Apr 03 12:56:11 2017 Quant Results File: 8330B\_0331PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0331PLUS.M (Chemstation Integrator)  
 Title : Explosives by 8330A,8330B,8332  
 Last Update : Fri Mar 31 15:52:11 2017  
 Response via : Initial Calibration  
 DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
 Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
 Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
-----						
System Monitoring Compounds						
15) S 3,4-Dinitrotolue	11.13	11.13	2213527	3894901	980.451	955.825
Spiked Amount	500.000	Range	69 - 134	Recovery	=	196.09%# 191.17%#
Target Compounds						
1) TNX	1.44	1.44	3291807	5102671	1002.550	992.434
2) HMX	1.57	1.57	1637404	4511723	994.775	991.962
3) DNX	1.84	1.84	2877895	4569743	1016.573	879.879
4) MNX	2.46	2.46	2334827	3681890	1007.893	1011.270
5) RDX	3.09	3.09	1863824	3014411	865.834	887.648
6) 1,3,5-Trinitrobe	4.86	4.86	4014616	7875760	909.029	908.362
7) 1,3-Dinitrobenze	6.12	6.12	5340443	3724635	934.183	956.541m
8) 3,5-Dinitroanili	6.53	6.53	4447707	7511029	914.658	937.341m
9) Nitrobenzene	7.66	7.66	3206264	3052032	986.309	1000.957
10) Nitroglycerin	0.00	9.19	0	5995769	N.D. d	4891.335
11) Tetryl	9.46	9.46	2993477	4942310	934.086	952.087
12) 2,4,6-Trinitroto	9.90	9.90	3759769	4519491	908.081	940.910
13) 2-Amino-4,6-Dini	10.35	10.34	3359253	5022578	1016.421	1016.044
14) 4-Amino-2,6-Dini	10.84	10.84	2409198	4886925	894.183	965.757
16) 2,4-Dinitrotolue	11.77	11.77	4804825	3171063	911.364	970.785
17) 2,6-Dinitrotolue	12.24	12.24	2744456	3591174	906.748	951.023
18) o-Nitrotoluene	15.25	15.25	2263076	3058882	988.841	1036.387
19) p-Nitrotoluene	15.84	15.84	3453995	2794658	1028.184	1143.963
20) m-Nitrotoluene	16.74	16.73	3401175	3994494	1040.650	1083.488m
21) PETN	0.00	18.77	0	6738962	N.D. d	4981.042m

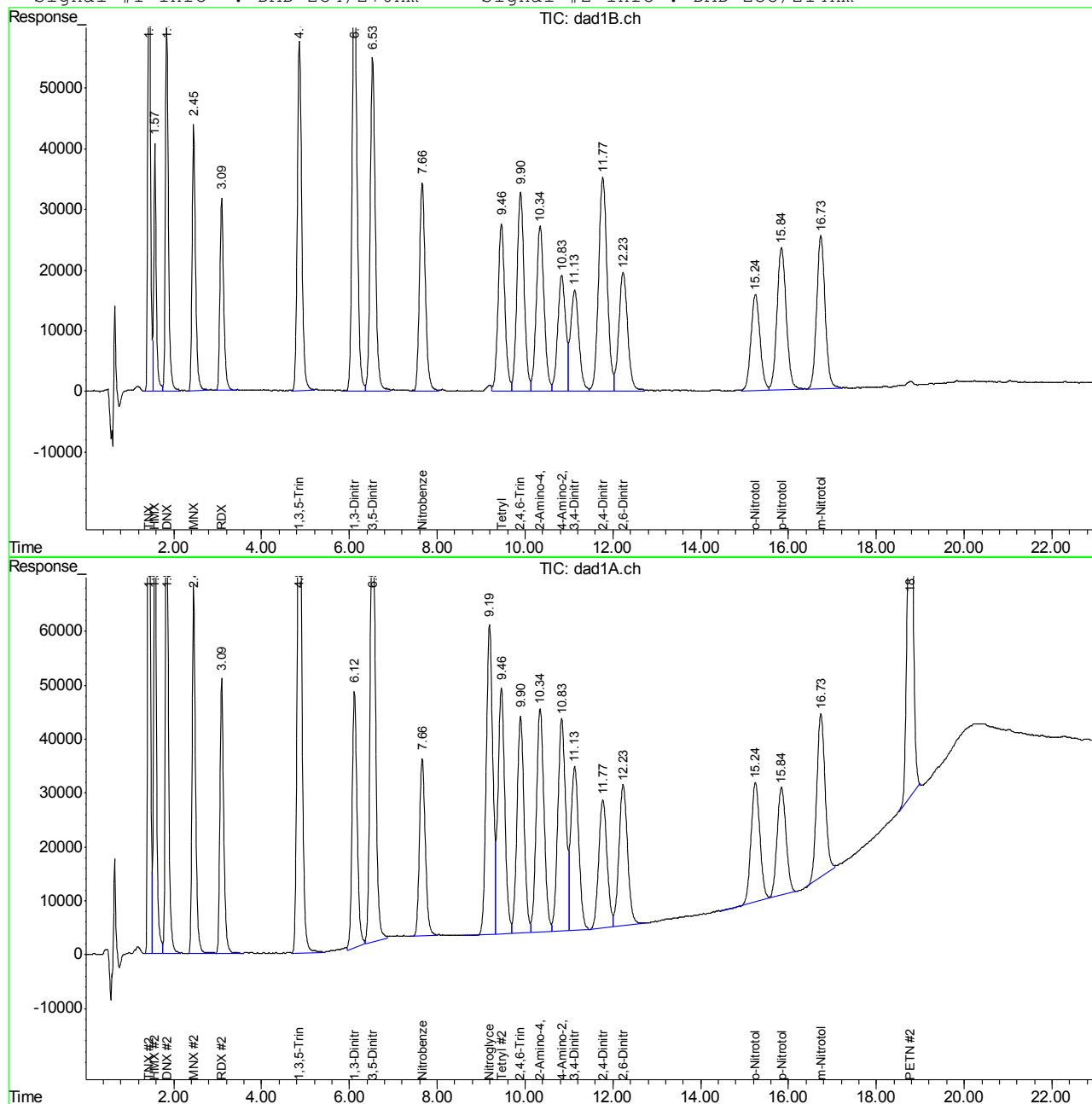
-----  
 (f)=RT Delta > 1/2 Window (#)=Amounts differ by > 40% (m)=manual int.  
 BB054009.D 8330B\_0331PLUS.M Mon Apr 03 12:57:08 2017

## Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\0403BPL\BB054009.D\dad1B.ch Vial: 2  
Signal #2 : C:\HPCHEM\1\DATA\0403BPL\BB054009.D\dad1A.ch  
Acq On : 03-Apr-2017, 11:52:12 Operator: evitam  
Sample : CC1568-1000 Inst : G1315B  
Misc : op64396, gbb1569, 10.0, , , 50, 1, SOIL Multiplr: 1.00  
IntFile Signal #1: events.e IntFile Signal #2: events2.e  
Quant Time: Apr 3 12:56 2017 Quant Results File: 8330B\_0331PLUS.RES

Quant Method : D:\MSDCHEM\1...\8330B\_0331PLUS.M (Chemstation Integrator)  
Title : Explosives by 8330A, 8330B, 8332  
Last Update : Fri Mar 31 15:52:11 2017  
Response via : Multiple Level Calibration  
DataAcq Meth : 8330B.M

Volume Inj. : 100ul  
Signal #1 Phase : Extend C-18 Signal #2 Phase: Extend C-18  
Signal #1 Info : DAD 254/270nm Signal #2 Info : DAD 235/214nm



# Manual Integration Approval Summary

Page 1 of 1

**Sample Number:** GBB1569-CC1568

**Method:** SW846 8330B

**Lab FileID:** BB054009.D

**Analyst approved:** 04/03/17 13:01

**Injection Time:** 04/03/17 11:52

**Supervisor approved:** 04/03/17 18:47

(b) (6)

(b) (6)

Parameter	CAS	Sig#	R.T. (min.)	Reason
1,3-Dinitrobenzene	99-65-0	2	6.12	Poorly defined baseline
3,5-Dinitroaniline	618-87-1	2	6.53	Poorly defined baseline
m-Nitrotoluene	99-08-1	2	16.73	Poorly defined baseline
PETN	78-11-5	2	18.77	Poorly defined baseline

9.7.22.1

9

## SGS ACCUTEST-ORLANDO

DATE:	3/20/17
COLUMN TYPE:	EXT-C18
AMOUNT INJECTED:	100 ul
INSTRUMENT:	HPLC5-BB

## HPLC5-BB ANALYSIS LOG

METHODS:	8330 A-10
ACQ. METHOD:	8330 B
PROC. METHOD:	8330 C-10
CALIB. DATE:	3/20/17
RUN BATCH:	GBB 1564

ANALYST:	EH
ACETONITRILE LOT #:	3303
MEOH LOT #:	6-7161
HEAD PRESSURE:	235

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	COMMENTS
BB 0537A	13	F42117-2	8330	OP42117	1X	19313279-11	ACCU LOW
BB 98	14	4		LC832	1:1	CC1504-1000	1st run low
BB 99	15	5				CCB	ND
BB 100	16	6		OP42117	X	OP42117-2	ACCU LOW
BB 01	17	7				↓	
BB 02	18	8				↓	
BB 03	19	9				↓	
BB 04	20	10				↓	
BB 05	21	11				↓	
BB 06	22	12				↓	
BB 07	23	13				↓	
BB 08	24	14				↓	
BB 09	25	15				↓	
BB 10	26	16				↓	
BB 11	27	17				↓	
BB 12	28	18				↓	
BB 13	29	19				↓	
BB 14	30	20				↓	
BB 15	31	21				↓	
BB 16	32	22				↓	
BB 17	33	23				↓	
BB 18	34	24				↓	
BB 19	35	25				↓	
BB 20	36	26				↓	
BB 21	37	27				↓	
BB 22	38	28				↓	
BB 23	39	29				↓	
BB 24	40	30				↓	
BB 25	41	31				↓	
BB 26	42	32				↓	
BB 27	43	33				↓	
BB 28	44	34				↓	
BB 29	45	35				↓	
BB 30	46	36				↓	
BB 31	47	37				↓	
BB 32	48	38				↓	
BB 33	49	39				↓	
BB 34	50	40				↓	
BB 35	51	41				↓	
BB 36	52	42				↓	
BB 37	53	43				↓	
BB 38	54	44				↓	
BB 39	55	45				↓	
BB 40	56	46				↓	
BB 41	57	47				↓	
BB 42	58	48				↓	
BB 43	59	49				↓	
BB 44	60	50				↓	
BB 45	61	51				↓	
BB 46	62	52				↓	
BB 47	63	53				↓	
BB 48	64	54				↓	
BB 49	65	55				↓	
BB 50	66	56				↓	
BB 51	67	57				↓	
BB 52	68	58				↓	
BB 53	69	59				↓	
BB 54	70	60				↓	
BB 55	71	61				↓	
BB 56	72	62				↓	
BB 57	73	63				↓	
BB 58	74	64				↓	
BB 59	75	65				↓	
BB 60	76	66				↓	
BB 61	77	67				↓	
BB 62	78	68				↓	
BB 63	79	69				↓	
BB 64	80	70				↓	
BB 65	81	71				↓	
BB 66	82	72				↓	
BB 67	83	73				↓	
BB 68	84	74				↓	
BB 69	85	75				↓	
BB 70	86	76				↓	
BB 71	87	77				↓	
BB 72	88	78				↓	
BB 73	89	79				↓	
BB 74	90	80				↓	
BB 75	91	81				↓	
BB 76	92	82				↓	
BB 77	93	83				↓	
BB 78	94	84				↓	
BB 79	95	85				↓	
BB 80	96	86				↓	
BB 81	97	87				↓	
BB 82	98	88				↓	
BB 83	99	89				↓	
BB 84	100	90				↓	
BB 85	101	91				↓	
BB 86	102	92				↓	
BB 87	103	93				↓	
BB 88	104	94				↓	
BB 89	105	95				↓	
BB 90	106	96				↓	
BB 91	107	97				↓	
BB 92	108	98				↓	
BB 93	109	99				↓	
BB 94	110	100				↓	
BB 95	111	101				↓	
BB 96	112	102				↓	
BB 97	113	103				↓	
BB 98	114	104				↓	
BB 99	115	105				↓	
BB 100	116	106				↓	

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration  
 All strikeouts must be initiated and dated. If correction was not due to a transcription error, then list the reason for correction.

hplc5\_bb\_log.xls NF rev. 06/16

Analysis

28 of 100



SGS ACCUTEST-ORLANDO

DATE: 3/24/17  
 COLUMN TYPE: 2x1 C18  
 AMOUNT INJECTED: 100 ul  
 INSTRUMENT: HPLC5-BB

HPLC5-BB ANALYSIS LOG

METHODS: 8330 816  
 ACQ. METHOD: 8330 B  
 PROC. METHOD: 8330 816  
 CALIB. DATE: 3/24/17  
 RUN BATCH: GBB 1564

ANALYST: QH 84 3241  
 ACETONITRILE LOT #: 83303  
 MECH LOT #: 10714  
 HEAD PRESSURE: 235

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	COMMENTS
BB 05377	2	CEB	B330				
BB 78	4	↓					NO
BB 79	42	ic1564-20					NO
BB 80	42	-20					curve ptes
BB 81	43	↓					
BB 82	44	-50					
BB 83	44	-100					
BB 84	45	-200					
BB 85	46	-500					
BB 86	47	-1000					
BB 87	47	-2000					
BB 88	47	-500					
BB 89	50	↓					
BB 90	50	-500					
BB 91	5	Op6455-45					
BB 92	6	↓					
BB 93	7	-MB					
BB 94	8	↓					
BB 95	9	-J					
BB 96	10	-8					
BB 97	10	Op6455-M5					
BB 98	11	↓					
BB 99	11	-MSD					
BB 100	12	1936379-10					

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration  
 All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction. (b) (6)

hplc5\_bb\_log.xls NF rev. 06/16

## SGS ACCUTEST-ORLANDO

DATE:	3/27/17
COLUMN TYPE:	C18
AMOUNT INJECTED:	100 ul
INSTRUMENT:	HPLC5-BB

## HPLC5-BB ANALYSIS LOG

METHODS:	8330	ALB
ACQ. METHOD:	8330B	
PROC. METHOD:	8330	plus
CALIB. DATE:	3/24/17	
RUN BATCH:	GBB	1567

ANALYST:	CH
ACETONITRILE LOT #:	3353
MEOH LOT #:	16183
HEAD PRESSURE:	256

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	COMMENTS
BB 053875	1	CCB	8330				ND
BB 1	2	CC1564100		LC823	1.1	p11	yes
BB 1	3	CC1564100		LC823	1X	↓	✓
BB 1	4	CC1564100					NO
BB 1	5	CC1564100					✓ NO SUMS
BB 1	6	CC1564100					NO
BB 1	7	CC1564100					NO
BB 1	8	CC1564100					NO
BB 1	9	CC1564100					NO
BB 1	10	CC1564100					NO
BB 1	11	CC1564100					NO
BB 1	12	CC1564100					NO
BB 1	13	CC1564100					NO
BB 1	14	CC1564100					NO
BB 1	15	CC1564100					NO
BB 1	16	CC1564100					NO
BB 1	17	CC1564100					NO
BB 1	18	CC1564100					NO
BB 1	19	CC1564100					NO
BB 1	20	CC1564100					NO
BB 1	21	CC1564100					NO
BB 1	22	CC1564100					NO
BB 1	23	CC1564100					NO
BB 1	24	CC1564100					NO
BB 1	25	CC1564100					NO
BB 1	26	CC1564100					NO
BB 1	27	CC1564100					NO
BB 1	28	CC1564100					NO
BB 1	29	CC1564100					NO
BB 1	30	CC1564100					NO
BB 1	31	CC1564100					NO
BB 1	32	CC1564100					NO
BB 1	33	CC1564100					NO
BB 1	34	CC1564100					NO
BB 1	35	CC1564100					NO
BB 1	36	CC1564100					NO
BB 1	37	CC1564100					NO
BB 1	38	CC1564100					NO
BB 1	39	CC1564100					NO
BB 1	40	CC1564100					NO
BB 1	41	CC1564100					NO
BB 1	42	CC1564100					NO
BB 1	43	CC1564100					NO
BB 1	44	CC1564100					NO
BB 1	45	CC1564100					NO
BB 1	46	CC1564100					NO
BB 1	47	CC1564100					NO
BB 1	48	CC1564100					NO
BB 1	49	CC1564100					NO
BB 1	50	CC1564100					NO
BB 1	51	CC1564100					NO
BB 1	52	CC1564100					NO
BB 1	53	CC1564100					NO
BB 1	54	CC1564100					NO
BB 1	55	CC1564100					NO
BB 1	56	CC1564100					NO
BB 1	57	CC1564100					NO
BB 1	58	CC1564100					NO
BB 1	59	CC1564100					NO
BB 1	60	CC1564100					NO
BB 1	61	CC1564100					NO
BB 1	62	CC1564100					NO
BB 1	63	CC1564100					NO
BB 1	64	CC1564100					NO
BB 1	65	CC1564100					NO
BB 1	66	CC1564100					NO
BB 1	67	CC1564100					NO
BB 1	68	CC1564100					NO
BB 1	69	CC1564100					NO
BB 1	70	CC1564100					NO
BB 1	71	CC1564100					NO
BB 1	72	CC1564100					NO
BB 1	73	CC1564100					NO
BB 1	74	CC1564100					NO
BB 1	75	CC1564100					NO
BB 1	76	CC1564100					NO
BB 1	77	CC1564100					NO
BB 1	78	CC1564100					NO
BB 1	79	CC1564100					NO
BB 1	80	CC1564100					NO
BB 1	81	CC1564100					NO
BB 1	82	CC1564100					NO
BB 1	83	CC1564100					NO
BB 1	84	CC1564100					NO
BB 1	85	CC1564100					NO
BB 1	86	CC1564100					NO
BB 1	87	CC1564100					NO
BB 1	88	CC1564100					NO
BB 1	89	CC1564100					NO
BB 1	90	CC1564100					NO
BB 1	91	CC1564100					NO
BB 1	92	CC1564100					NO
BB 1	93	CC1564100					NO
BB 1	94	CC1564100					NO
BB 1	95	CC1564100					NO
BB 1	96	CC1564100					NO
BB 1	97	CC1564100					NO
BB 1	98	CC1564100					NO
BB 1	99	CC1564100					NO
BB 1	100	CC1564100					NO

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PI Poor Instrument Integration

(b) (6)

hplc5\_bb\_log.xls NF rev. 06/16

Analyst

34 of 100

SGS ACCUTEST-ORLANDO

DATE: 3/20/17  
 COLUMN TYPE: EXT  
 AMOUNT INJECTED: 10ul  
 INSTRUMENT: HPLC5-BB

HPLC5-BB ANALYSIS LOG

METHODS: 8330 A1B  
 ACQ. METHOD: 8330B  
 PROC. METHOD: 8330004NLS  
 CALIB. DATE: 3/14/17  
 RUN BATCH: GBB 1567

ANALYST: CPH  
 ACETONITRILE LOT #: 3353  
 MECH LOT #: 16783  
 HEAD PRESSURE: 556

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	COMMENTS
BB 053915	53	g101K C	8330	0164321	1X		NO
BB 16	2	201504-1000		LC803	1:1	pi	NO
BB 17	59	E5854		E5856	10/40	40X	NO
BB 18	59						✓
BB 19	60	CCB		0164321	1X	pi	NO
BB 20	61	0164345-65					NO
BB 21	62	-110					NO
BB 22	63	F942421-25					NO
BB 23	64	-116					✓
BB 24	65	-27					NO
BB 25	66	0164345-65		0164345		pi	NO
BB 26	67	-110			10/40	6X	REIX
BB 27	68	0164345-1				pi	
BB 28	69	0164345-105				pi	
BB 29	70	-1150				pi	NO
BB 30	71	CCB		LC833	1:1		NO
BB 31	72	CCB		0164345	10/40	6X	REIX
BB 32	73	0164345-2					
BB 33	74	-3					
BB 34	75	-4					

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Bump, PI Poor Instrument Integration  
 All strikeouts must be initiated and dated. If correction was not due to a transcription error, then list the reason for correction.

Analyst:

hplc5\_bb\_log.xls NF rev. 06/16

35 of 100

## SGS ACCUTEST-ORLANDO

DATE: 3/29/17	DATE: 3/29/17
COLUMN TYPE: F-XF 00	COLUMN TYPE: F-XF 00
AMOUNT INJECTED: 100ul	AMOUNT INJECTED: 100ul
INSTRUMENT: HPLC5-BB	INSTRUMENT: HPLC5-BB

## HPLC5-BB ANALYSIS LOG

METHODS: 8330 A16	METHODS: 8330 A16
ACQ. METHOD: 8330 B	ACQ. METHOD: 8330 B
PROC. METHOD: 8330 A243	PROC. METHOD: 8330 A243
CALIB. DATE: 3/24/17	CALIB. DATE: 3/24/17
RUN BATCH: GBB 1567	RUN BATCH: GBB 1567

ANALYST: EM	ANALYST: EM
ACETONITRILE LOT #: 3353	ACETONITRILE LOT #: 3353
MEOH LOT #: 161203	MEOH LOT #: 161203
HEAD PRESSURE: 256	HEAD PRESSURE: 256

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	COMMENTS
BB 053935	13	TA 31379-5	8330	061345	10040	5x	DERIV
BB 3674	74	-6					
BB 3775	75	-7					
BB 3876	76	-9				LA 31379-8	
BB 3977	77	-12				-9	
BB 4078	78	-13				-12	
BB 4179	79	-13				-13	
BB 4279	79	CC1564-1000				PI1	PI1
BB 4379	79	CC				10040	NO
BB 4479	79	CCB				10040	DERIV
BB 4579	79	LA 31379-14					
BB 4679	79	-15					
BB 4779	79	-16					
BB 4879	79	-17					
BB 4979	79	-18					
BB 5079	79	-19					
BB 5179	79	-20					
BB 5279	79	-21					
BB 5379	79	-22					
BB 5479	79	CC1564-1000				1:1	PI1
BB 5579	79	CCB					NO

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR(b) (6) Poor Instrument Integration. All strikeouts must be initiated and dated. If correction was not due to a transcription error, then list the reason for correction.

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hplc5\_bb\_log.xls NF rev. 06/16

36 of 100

SGS ACCUTEST-ORLANDO

DATE: 3/29/17	Ext C18
COLUMN TYPE: Ext C18	UI
AMOUNT INJECTED: 100	
INSTRUMENT: HPLC5-BB	

HPLC5-BB ANALYSIS LOG

METHODS: 8330 A1B
ACQ. METHOD: 8330 B
PROC. METHOD: 8330 0324 plus
CALIB. DATE: 3/29/17
RUN BATCH: GBB 1567

ANALYST: ELI
ACETONITRILE LOT #: 3303
MEOH LOT #: 16180
HEAD PRESSURE: 256

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	COMMENTS
BB 053755	89	064436	8330	064436	1X		✓
BB 54	90	✓			✓		ND
BB 57	91	064436			100405X		RIE IX
BB 58	92	-44					✓
BB 59	93	-25					✓
BB 60	94	-26					✓
BB 61	95	-27					✓
BB 62	96	-28					✓
BB 63	97	-29					✓
BB 64	98	-30					✓
BB 65	2	061364-1000		LC883	1.1	pil	ND
BB 66	1	CCB					ND
BB 67	99	064436		064436	100405X		RIE IX
BB 68	100	✓			✓		✓
BB 69	3	064436-05		064436	1X	pil	RIE IX
BB 70	4	064436-05					ND
BB 71	5	064436-05					ND
BB 72	6	064436-05					✓
BB 73	7	✓					✓
BB 74	8	064436-05		064436	✓	pil	RIE IX

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration  
All strikeouts must be initiated and dated. If correction was not due to a transcription error, then list the reason for correction.

hplc5\_bb\_log.xls NF rev. 06/16

37 of 100

Analy

## SGS ACCUTEST-ORLANDO

DATE: 3/29/14	EXT: 018
COLUMN TYPE: 100 ul	
AMOUNT INJECTED: 100 ul	
INSTRUMENT: HPLC5-BB	

## HPLC5-BB ANALYSIS LOG

METHODS: 8330 H10
ACQ. METHOD: 8330 B
PROC. METHOD: 8330 0021 plus
CALIB. DATE: 3/11/14
RUN BATCH: GBB 1567

ANALYST: C.R.
ACETONITRILE LOT #: 3353
MEOH LOT #: 16783
HEAD PRESSURE: 256

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	MANUALLY INTEGRATED PEAKS RATONALE, PEAK #	COMMENTS
BB053915	7	OP01390-P11	8330	OP04390 K		pi	2a low recovery
BB	10	-110					NO
BB	77	CC10104-1000		1083	1:1	pi1	NO
BB	78	CCB					NO
BB	79	FAU2152-1		OP04390 K		pi1	NO
BB	80	OP04390-15					✓
BB	81	↓ -1050					✓
BB	82	FAU2152-2					NO
BB	83	-3					NO
BB	84	OP04390-dup					NO
BB	85	-trip					NO
BB	86	F142152-9					NO
BB	87	G181011C A					NO
BB	88	20 ↓ B					NO
BB	89	20C 1564-1000		10833	1:1	pi1	NO
BB	90	CCB					NO
BB	91	21					NA 250 3/30/12
BB	92	22					
BB	93	23					
BB	94						

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, (b) (6)

All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

Analysis

hplc5\_bb\_log.xls NF rev. 06/16

38 of 100

## SGS ACCUTEST-ORLANDO

DATE:	3/3/17
COLUMN TYPE:	EXT 018
AMOUNT INJECTED:	100 ul
INSTRUMENT:	HPLC5-BB

## HPLC5-BB ANALYSIS LOG

METHODS:	8330 A1 B
ACQ. METHOD:	8330 9
PROC. METHOD:	8330 03 30
CALIB. DATE:	3/1/74
RUN BATCH:	GBB 508

ANALYST:	CH
ACETONITRILE LOT #:	2353
MEOH LOT #:	164883
HEAD PRESSURE:	250

[illegible]

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration  
All strikeouts must be initiated and dated. If correction was not due to a transcription error, then list the reason for correction. (b) (6)

hplc5 bb log.xls NF rev. 06/16

## Analysis

39 of 100



SGS ACCUTEST-ORLANDO

DATE: 4/3/17  
COLUMN TYPE: C18  
AMOUNT INJECTED: 100 ul  
INSTRUMENT: HPLC5-BB

HPLC5-BB ANALYSIS LOG

METHODS: 8330 A16  
ACQ. METHOD: 8330 B  
PROC. METHOD: 8330 035144  
CALIB. DATE: 3/3/16  
RUN BATCH: GBB 1569

ANALYST: EM  
ACETONITRILE LOT #: 3353  
MEOH LOT #: 14783  
HEAD PRESSURE: 252

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	COMMENTS
BB 05601	1	CSB	8330	—	—		ND
BB 02	2	CSB 1569-1000	8330	10923	1:1		REL COV 100
BB 03	2	— 1000p		↓	↓	P11	PR20
BB 04	8	OP 64345-BS		OP 64345	1X		✓
BB 05	9	— P11		↓	↓		✓
BB 06	4	OP 64345-BS		OP 64345			—
BB 07	5	OP 64345-BS		OP 64345			—
BB 08	6	— P11		↓	↓		—
BB 09	2	CSB 1569-1000	8330	10923	1:1		PASS
BB 10	1	CSB		—	—		ND
BB 11	10	1031379-1		OP 64345	1X		ND
BB 12	11	OP 64345-MS					✓
BB 13	12	↓ MSQ					✓
BB 14	13	1031379-2					ND
BB 15	14	— 3					ND
BB 16	15	— 4					ND
BB 17	16	— 5					ND
BB 18	17	— 6					ND
BB 19	18	— 7					ND
BB 20	19	↓ 2		↓	↓		ND

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline, P11 Poor Instrument Integration  
All strikeouts must be initiated and dated. If correction was not due to a transcription error, then list the reason for correction (b) (6)

hplc5\_bb\_log.xls NF rev. 06/16



## SGS ACCUTEST-ORLANDO

DATE: 4/2/17
COLUMN TYPE: C18
AMOUNT INJECTED: 100 µl
INSTRUMENT: HPLC5-BB

## HPLC5-BB ANALYSIS LOG

METHODS: 8330 A10
ACQ. METHOD: 8330 B
PROC. METHOD: 8330 D31plus
CALIB. DATE: 8/3/16
RUN BATCH: GBB 1569

ANALYST: FU
ACETONITRILE LOT #: 3333
MEOH LOT #: 16783
HEAD PRESSURE: 252

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	MANUALLY INTEGRATED PEAKS RATIONALE, PEAK #	COMMENTS
BB054021	2	CC1508-000	8330	LC833	1:1	pi	p-nitro 9 2nd signal
BB 22	1	CCB					ND
BB 23	20	1A31379-9					ND
BB 24	21	-12					
BB 25	22	-13					
BB 26	23	-14					
BB 27	24	-15					
BB 28	25	-16					
BB 29	26	-17					
BB 30	27	-18					
BB 31	28	-19					
BB 32	29	-20					
BB 33	2	CC1508-1000					
BB 34	1	CCB					
BB 35	30	1A31379-21					
BB 36	41	-22					
BB 37	42	-23					
BB 38	43	-24					
BB 39	44	-25					
BB 40	45	-26					
BB 41	3	CC1508-1000					
BB 42	1	CCB					
BB 43	30	1A31379-21					
BB 44	41	-22					
BB 45	42	-23					
BB 46	43	-24					
BB 47	44	-25					
BB 48	45	-26					
BB 49	3	CC1508-1000					
BB 50	1	CCB					
BB 51	30	1A31379-21					
BB 52	41	-22					
BB 53	42	-23					
BB 54	43	-24					
BB 55	44	-25					
BB 56	45	-26					

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline (b) (6)  
 All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

hplc5\_bb\_log.xls NF rev. 06/16

Analy

41 of 100



# EXP/PFC SAMPLE PREP REPORT

Prep Method: 8330A, 8332, 8330B, 587MOD (PFC) or Other        (circle)

Date/Time: 03/29/17 1400  
Started {mm/dd/yy 24:00}

Therm. ID:        Corr. Factor ( $\pm^\circ\text{C}$ ):         
Bath Temp. (High)  $^\circ\text{C}$ : — / — {obs/corr}

Date/Time: 03/30/17 0820  
Finished (mm/dd/yy 24:00)

Ultrasonic Bath ID (8330A or 8332):             
Shaker Table ID (8330B): ST 1

Batch#: 0P64396

Ext. By: MB

Vialed By: DL

Balance ID: *METTLER 1*

[illegible]

**Comments:**

Surr. ID: <u>ES745L</u>	Conc: <u>20 ppm</u>	Exp. Date: <u>04/30/17</u>	Inj. By: <u>MB</u>	Ver. By: <u>MB</u>
Spk.1 ID: <u>ES813</u>	Conc: <u>20 ppm</u>	Exp. Date: <u>07/27/17</u>	Inj. By: <u>MB</u>	Ver. By: <u>MB</u>
Spk.2 ID: <u>8403C</u>	Conc: <u>1000 ug/ml</u>	Exp. Date: <u>03/29/18</u>	Inj. By: <u>MB</u>	Ver. By: <u>MB</u>
<u>70688</u>	Conc: <u>1200 ug/ml</u>	Exp. Date: <u>06/05/17</u>	Inj. By: <u>MB</u>	Ver. By: <u>MB</u>

Acetonitrile Lot # 154525

Methanol Lot # \_\_\_\_\_

Water Lot# *HPLC*

Syring (b) (6)

Reagent # \_\_\_\_\_

Reling

Date: 03/30/17

Accept

Date: 03-30-17

NF 05/16

extsolid\_exp 051616.xls

## Metals Analysis

### QC Data Summaries

Includes the following where applicable:

- Instrument Runlogs
- Initial and Continuing Calibration Blanks
- Initial and Continuing Calibration Checks
- High and Low Check Standards
- Interfering Element Check Standards
- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries
- IDL and Linear Range Summaries

SGS Accutest Instrument Runlog  
Inorganics Analyses

Login Number: FA42152

Account: CAPEGAA - Cape Environmental Management Inc.  
Project: OB/OD Site I, OB Site II, Fort Bliss, TX

File ID: SB032817M1.ICP

Date Analyzed: 03/28/17

Methods: SW846 6010C

Analyst: LM

Run ID: MA13933

Parameters: Al,Sb,Cu,Pb,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
08:17	MA13933-STD1	1		STDA
08:25	MA13933-STD2	1		STDB
08:29	MA13933-STD3	1		STDC
08:33	MA13933-STD4	1		STDD
08:38	MA13933-HSTD1	1		
08:45	MA13933-ICV1	1		
08:54	MA13933-ICB1	1		
09:08	MA13933-CRIA1	1		
09:15	MA13933-ICSA1	1		
09:20	MA13933-ICSAB1	1		
09:27	MA13933-CCV1	1		
09:36	MA13933-CCB1	1		
09:45	MP31862-MB1	1		
09:49	MP31862-B1	1		
09:53	FA42136-1	1		(sample used for QC only; not part of login FA42152)
09:57	MP31862-D1	1		
10:01	MP31862-SD1	5		
10:05	MP31862-PS1	1		
10:09	MP31862-S1	1		
10:13	MP31862-S2	1		
10:17	ZZZZZZ	5		
10:21	MA13933-CCV2	1		
10:25	MA13933-CCB2	1		
10:30	ZZZZZZ	4		
10:34	ZZZZZZ	4		
10:38	ZZZZZZ	4		
10:42	ZZZZZZ	4		
10:46	ZZZZZZ	4		
10:50	ZZZZZZ	4		
10:55	ZZZZZZ	25		
11:03	ZZZZZZ	1		
11:07	ZZZZZZ	4		
11:11	MA13933-CCV3	1		

SGS Accutest Instrument Runlog  
Inorganics Analyses

Login Number: FA42152  
Account: CAPEGAA - Cape Environmental Management Inc.  
Project: OB/OD Site I, OB Site II, Fort Bliss, TX

File ID: SB032817M1.ICP Date Analyzed: 03/28/17 Methods: SW846 6010C  
Analyst: LM Run ID: MA13933  
Parameters: Al,Sb,Cu,Pb,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:15	MA13933-CCB3	1		
11:20	ZZZZZZ	1		
11:25	ZZZZZZ	1		
11:29	ZZZZZZ	1		
11:33	ZZZZZZ	1		
11:38	ZZZZZZ	1		
11:42	ZZZZZZ	1		
11:46	ZZZZZZ	1		
11:50	ZZZZZZ	1		
11:54	ZZZZZZ	1		
11:59	ZZZZZZ	1		
12:03	MA13933-CCV4	1		
12:07	MA13933-CCB4	1		
12:11	ZZZZZZ	1		
12:15	ZZZZZZ	1		
12:19	ZZZZZZ	1		
12:24	ZZZZZZ	1		
12:28	ZZZZZZ	1		
12:32	ZZZZZZ	1		
12:36	ZZZZZZ	1		
12:40	ZZZZZZ	1		
12:44	ZZZZZZ	1		
12:48	MP31869-MB1	1		
12:53	MA13933-CCV5	1		
12:57	MA13933-CCB5	1		
13:01	MP31869-B1	1		
13:05	FA42308-1F	1		(sample used for QC only; not part of login FA42152)
13:09	MP31869-D1	1		
13:13	MP31869-SD1	5		
13:18	MP31869-PS1	1		
13:22	MP31869-S1	1		
13:26	MP31869-S2	1		
13:30	ZZZZZZ	1		

SGS Accutest Instrument Runlog  
Inorganics Analyses

Login Number: FA42152  
Account: CAPEGAA - Cape Environmental Management Inc.  
Project: OB/OD Site I, OB Site II, Fort Bliss, TX

File ID: SB032817M1.ICP Date Analyzed: 03/28/17 Methods: SW846 6010C  
Analyst: LM Run ID: MA13933  
Parameters: Al,Sb,Cu,Pb,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:34	ZZZZZZ	1		
13:38	ZZZZZZ	1		
13:42	MA13933-CCV6	1		
13:46	MA13933-CCB6	1		
13:50	ZZZZZZ	1		
13:54	ZZZZZZ	1		
13:59	ZZZZZZ	1		
14:03	ZZZZZZ	1		
14:07	ZZZZZZ	2		
14:11	ZZZZZZ	1		
14:15	ZZZZZZ	1		
14:20	ZZZZZZ	1		
14:28	ZZZZZZ	1		
14:32	ZZZZZZ	5		
14:41	MA13933-CCV7	1		
14:45	MA13933-CCB7	1		
14:49	ZZZZZZ	1		
14:53	MP31871-D1	1		
14:58	ZZZZZZ	1		
15:02	ZZZZZZ	1		
15:06	ZZZZZZ	1		
15:10	ZZZZZZ	1		
15:14	ZZZZZZ	1		
15:19	MP31869-MB2A	1		
15:23	MP31869-MB3A	1		
15:27	MP31871-MB1	1		
15:32	MA13933-CCV8	1		
15:35	MA13933-CCB8	1		
16:03	MA13933-ICV2	1		
16:11	MA13933-CCV9	1		
16:19	MA13933-CCB9	1		
16:24	MP31871-B1	1		
16:28	FA42067-5	1		(sample used for QC only; not part of login FA42152)

SGS Accutest Instrument Runlog  
Inorganics Analyses

Login Number: FA42152  
Account: CAPEGAA - Cape Environmental Management Inc.  
Project: OB/OD Site I, OB Site II, Fort Bliss, TX

File ID: SB032817M1.ICP Date Analyzed: 03/28/17 Methods: SW846 6010C  
Analyst: LM Run ID: MA13933  
Parameters: Al,Sb,Cu,Pb,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
16:32	MP31871-SD1	5		
16:36	MP31871-PS1	1		
16:40	MP31871-S1	1		
16:45	MP31871-S2	1		
16:49	MP31871-D2	1		
16:53	ZZZZZZ	1		
16:57	ZZZZZZ	1		
17:01	ZZZZZZ	1		
17:06	MA13933-CCV10	1		
17:10	MA13933-CCB10	1		
17:14	ZZZZZZ	1		
17:18	ZZZZZZ	1		
17:22	ZZZZZZ	1		
17:26	FA42152-1	1		
17:30	FA42152-3	1		
17:34	FA42152-9	1		
17:38	FA42152-2	1		
----->	Last reportable sample/prep for job FA42152			
17:42	MP31872-MB1	1		
17:47	MP31872-B1	1		
17:51	FA42279-8	1		(sample used for QC only; not part of login FA42152)
17:55	MA13933-CCV11	1		
17:59	MA13933-CCB11	1		
18:03	MP31872-D1	1		
18:08	MP31872-SD1	5		
18:12	MP31872-S1	1		
18:16	MP31872-S2	1		
18:20	FA42279-4	1		(sample used for QC only; not part of login FA42152)
18:24	ZZZZZZ	1		
18:29	ZZZZZZ	1		
18:33	MP31872-D2	1		
18:37	MP31872-MB2	1		
18:42	MP31872-B2	1		
18:46	MA13933-CCV12	1		



SGS Accutest Instrument Runlog  
Inorganics Analyses

Login Number: FA42152  
Account: CAPEGAA - Cape Environmental Management Inc.  
Project: OB/OD Site I, OB Site II, Fort Bliss, TX

File ID: SB032817M1.ICP      Date Analyzed: 03/28/17      Methods: SW846 6010C  
Analyst: LM      Run ID: MA13933  
Parameters: Al,Sb,Cu,Pb,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
18:50	MA13933-CCB12	1		
19:35	MA13933-CCV13	1		
19:39	MA13933-CCB13	1		
19:43	MA13933-CCV14	1		
19:47	MA13933-CCB14	1		
20:26	MA13933-CCV15	1		
20:30	MA13933-CCB15	1		
20:35	MA13933-CRIA2	1		
20:39	MA13933-ICSA2	1		
20:43	MA13933-ICSAB2	1		
20:47	MA13933-CCV16	1		
20:51	MA13933-CCB16	1		
----->	Last reportable CCB for job FA42152 Refer to raw data for calibration curve and standards.			

## INTERNAL STANDARD SUMMARY

Login Number: FA42152  
Account: CAPEGAA - Cape Environmental Management Inc.  
Project: OB/OD Site I, OB Site II, Fort Bliss, TX

File ID: SB032817M1.ICP Date Analyzed: 03/28/17 Methods: SW846 6010C  
Analyst: LM Run ID: MA13933  
Parameters: Al, Sb, Cu, Pb, Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
08:17	MA13933-STD1	6350	47575	5948	2834
08:25	MA13933-STD2	6163	45863	5935	2610
08:29	MA13933-STD3	5970	44067	5844	2401
08:33	MA13933-STD4	5630	42231	5852	2209
08:38	MA13933-HSTD1	5663	42642	5930	2230
08:45	MA13933-ICV1	6014	44755	5936	2422
08:54	MA13933-ICB1	6169 R	46778 R	5970 R	2802 R
09:08	MA13933-CRIA1	6028	46285	5962	2667
09:15	MA13933-ICSA1	5397	40369	5758	2099
09:20	MA13933-ICSAB1	5395	40261	5734	2060
09:27	MA13933-CCV1	5911	44077	5886	2385
09:36	MA13933-CCB1	5963	46850	5982	2758
09:45	MP31862-MB1	6042	47356	6004	2757
09:49	MP31862-B1	5968	45559	5910	2511
09:53	FA42136-1	5723	43978	5762	2466
09:57	MP31862-D1	5789	44128	5906	2490
10:01	MP31862-SD1	6035	46177	5999	2681
10:05	MP31862-PS1	5790	44794	5898	2460
10:09	MP31862-S1	5734	43770	5824	2338
10:13	MP31862-S2	5751	44117	5786	2342
10:17	ZZZZZZ	6073	46018	5929	2630
10:21	MA13933-CCV2	5808	43671	5828	2355
10:25	MA13933-CCB2	6192	46972	5963	2800
10:30	ZZZZZZ	6005	45325	5879	2618
10:34	ZZZZZZ	6012	45499	5907	2621
10:38	ZZZZZZ	5949	45317	5908	2580
10:42	ZZZZZZ	5910	45164	5867	2574
10:46	ZZZZZZ	5929	45011	5992	2530
10:50	ZZZZZZ	6105	46623	6043	2686
10:55	ZZZZZZ	6045	46400	5936	2721
11:03	ZZZZZZ	5885	45893	5945	2608
11:07	ZZZZZZ	7037	53877	6910	2685
11:11	MA13933-CCV3	5761	43492	5709	2346

## INTERNAL STANDARD SUMMARY

Login Number: FA42152  
Account: CAPEGAA - Cape Environmental Management Inc.  
Project: OB/OD Site I, OB Site II, Fort Bliss, TX

File ID: SB032817M1.ICP Date Analyzed: 03/28/17 Methods: SW846 6010C  
Analyst: LM Run ID: MA13933  
Parameters: Al, Sb, Cu, Pb, Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
11:15	MA13933-CCB3	6078	46665	5889	2768
11:20	ZZZZZZ	6064	46938	5934	2752
11:25	ZZZZZZ	5309	40768	5709	2180
11:29	ZZZZZZ	5291	40281	5602	2163
11:33	ZZZZZZ	5206	39819	5581	2139
11:38	ZZZZZZ	5937	46968	5923	2728
11:42	ZZZZZZ	5785	45566	5898	2559
11:46	ZZZZZZ	5897	46602	5948	2630
11:50	ZZZZZZ	5885	45847	5815	2611
11:54	ZZZZZZ	5831	45343	5840	2587
11:59	ZZZZZZ	6022	47134	6024	2665
12:03	MA13933-CCV4	5816	44331	5873	2388
12:07	MA13933-CCB4	6123	46905	5913	2780
12:11	ZZZZZZ	5936	45796	5927	2607
12:15	ZZZZZZ	5905	45981	5921	2618
12:19	ZZZZZZ	5945	45936	5886	2639
12:24	ZZZZZZ	5883	45424	5920	2572
12:28	ZZZZZZ	5909	45761	5889	2600
12:32	ZZZZZZ	5950	46207	5892	2638
12:36	ZZZZZZ	5892	46040	5934	2617
12:40	ZZZZZZ	5808	45313	5949	2559
12:44	ZZZZZZ	5753	44785	5801	2511
12:48	MP31869-MB1	6048	47252	5878	2757
12:53	MA13933-CCV5	5763	43792	5758	2359
12:57	MA13933-CCB5	6136	47259	5907	2777
13:01	MP31869-B1	5845	45191	5921	2470
13:05	FA42308-1F	5753	44612	5815	2506
13:09	MP31869-D1	5791	44740	5848	2515
13:13	MP31869-SD1	5931	45470	5808	2640
13:18	MP31869-PS1	5786	44433	5760	2465
13:22	MP31869-S1	5838	43898	5768	2370
13:26	MP31869-S2	5852	44138	5819	2373
13:30	ZZZZZZ	5824	44909	5801	2560

## INTERNAL STANDARD SUMMARY

Login Number: FA42152  
Account: CAPEGAA - Cape Environmental Management Inc.  
Project: OB/OD Site I, OB Site II, Fort Bliss, TX

File ID: SB032817M1.ICP Date Analyzed: 03/28/17 Methods: SW846 6010C  
Analyst: LM Run ID: MA13933  
Parameters: Al, Sb, Cu, Pb, Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
13:34	ZZZZZZ	5792	44865	5802	2557
13:38	ZZZZZZ	5762	44811	5872	2487
13:42	MA13933-CCV6	5793	44422	5848	2387
13:46	MA13933-CCB6	5988	46338	5845	2732
13:50	ZZZZZZ	5808	44913	5820	2537
13:54	ZZZZZZ	5856	44775	5798	2553
13:59	ZZZZZZ	5819	44677	5861	2513
14:03	ZZZZZZ	5991	46562	5867	2678
14:07	ZZZZZZ	5822	44793	5868	2511
14:11	ZZZZZZ	5955	45400	5853	2625
14:15	ZZZZZZ	5941	45680	5829	2630
14:20	ZZZZZZ	5884	45261	5811	2534
14:28	ZZZZZZ	5863	45192	5832	2544
14:32	ZZZZZZ	6021	45726	5958	2622
14:41	MA13933-CCV7	5598	42613	5723	2302
14:45	MA13933-CCB7	6084	46694	5889	2763
14:49	ZZZZZZ	6034	46699	5898	2719
14:53	MP31871-D1	7067	53486	7089	2334
14:58	ZZZZZZ	6039	45960	5862	2695
15:02	ZZZZZZ	5983	45919	5909	2690
15:06	ZZZZZZ	5998	46403	5892	2713
15:10	ZZZZZZ	6020	46264	5955	2711
15:14	ZZZZZZ	5956	46079	5870	2697
15:19	MP31869-MB2A	6019	46651	5851	2726
15:23	MP31869-MB3A	6099	47111	5903	2760
15:27	MP31871-MB1	6100	47275	5948	2773
15:32	MA13933-CCV8	5804	43435	5818	2351
15:35	MA13933-CCB8	6111	46179	5904	2748
16:03	MA13933-ICV2	5722	43267	5786	2334
16:11	MA13933-CCV9	5744	43269	5807	2346
16:19	MA13933-CCB9	5986	45649	5803	2701
16:24	MP31871-B1	5957	45483	5995	2502
16:28	FA42067-5	7114	53071	7121	2363

## INTERNAL STANDARD SUMMARY

Login Number: FA42152  
Account: CAPEGAA - Cape Environmental Management Inc.  
Project: OB/OD Site I, OB Site II, Fort Bliss, TX

File ID: SB032817M1.ICP Date Analyzed: 03/28/17 Methods: SW846 6010C  
Analyst: LM Run ID: MA13933  
Parameters: Al, Sb, Cu, Pb, Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
16:32	MP31871-SD1	6183	46962	6111	2530
16:36	MP31871-PS1	6923	51943	7039	2284
16:40	MP31871-S1	7109	53473	7223	2232
16:45	MP31871-S2	7012	52628	7018	2241
16:49	MP31871-D2	6973	51997	6893	2337
16:53	ZZZZZZ	7309	54431	7300	2352
16:57	ZZZZZZ	7363	55232	7329	2346
17:01	ZZZZZZ	7404	55320	7428	2304
17:06	MA13933-CCV10	5747	42952	5684	2330
17:10	MA13933-CCB10	6081	45730	5857	2737
17:14	ZZZZZZ	7323	54893	7203	2400
17:18	ZZZZZZ	7121	53516	7049	2446
17:22	ZZZZZZ	7233	54354	7088	2445
17:26	FA42152-1	7225	53970	7086	2412
17:30	FA42152-3	7337	54489	7122	2376
17:34	FA42152-9	7146	52989	6915	2397
17:38	FA42152-2	7006	51629	6721	2413
17:42	MP31872-MB1	6135	45949	5728	2726
17:47	MP31872-B1	5969	44480	5761	2460
17:51	FA42279-8	5885	43288	5688	2435
17:55	MA13933-CCV11	5854	42870	5505	2344
17:59	MA13933-CCB11	6182	45674	5653	2732
18:03	MP31872-D1	5874	42793	5515	2416
18:08	MP31872-SD1	6116	44302	5623	2597
18:12	MP31872-S1	5878	42477	5481	2315
18:16	MP31872-S2	5948	43136	5579	2343
18:20	FA42279-4	5882	42725	5636	2398
18:24	ZZZZZZ	5909	42742	5572	2406
18:29	ZZZZZZ	5918	43107	5549	2420
18:33	MP31872-D2	5876	42075	5503	2390
18:37	MP31872-MB2	6014	43244	5657	2483
18:42	MP31872-B2	5977	43220	5560	2358
18:46	MA13933-CCV12	5946	42687	5472	2354

## INTERNAL STANDARD SUMMARY

Login Number: FA42152  
Account: CAPEGAA - Cape Environmental Management Inc.  
Project: OB/OD Site I, OB Site II, Fort Bliss, TX

File ID: SB032817M1.ICP      Date Analyzed: 03/28/17      Methods: SW846 6010C  
Analyst: LM      Run ID: MA13933  
Parameters: Al, Sb, Cu, Pb, Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
18:50	MA13933-CCB12	6262	45264	5565	2739
19:35	MA13933-CCV13	6022	42901	5468	2373
19:39	MA13933-CCB13	6304	45683	5538	2759
19:43	MA13933-CCV14	6070	43831	5493	2395
19:47	MA13933-CCB14	6320	45866	5559	2763
20:26	MA13933-CCV15	5816	42204	5306	2319
20:30	MA13933-CCB15	6213	45239	5446	2735
20:35	MA13933-CRIA2	6107	44372	5413	2620
20:39	MA13933-ICSA2	5520	39453	5271	2106
20:43	MA13933-ICSAB2	5514	39282	5210	2058
20:47	MA13933-CCV16	5934	42644	5380	2358
20:51	MA13933-CCB16	6179	44971	5390	2726

R = Reference for ISTD limits. ! = Outside limits.

## LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	60-125 %
Istd#2	Yttrium (3600)	60-125 %
Istd#3	Yttrium (3710)	60-125 %
Istd#4	Indium	60-125 %

BLANK RESULTS SUMMARY  
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA42152  
Account: CAPEGAA - Cape Environmental Management Inc.  
Project: OB/OD Site I, OB Site II, Fort Bliss, TX

File ID: SB032817M1.ICP Date Analyzed: 03/28/17 Methods: SW846 6010C  
QC Limits: result < RL Run ID: MA13933 Units: ug/l

Time: Sample ID:			08:54 ICB1		09:36 CCB1		10:25 CCB2		11:15 CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	14	8.4	<200	17.0	<200	12.2	<200	4.6	<200
Antimony	6.0	1	-0.10	<20	-0.20	<20	0.0	<6.0	0.20	<6.0
Arsenic	10	1.3	anr							
Barium	200	1	anr							
Beryllium	4.0	.2	anr							
Cadmium	4.0	.2	anr							
Calcium	1000	50	anr							
Chromium	10	1	anr							
Cobalt	50	.2	anr							
Copper	25	1	0.30	<25	1.2	<25	0.70	<25	0.40	<25
Iron	300	17	anr							
Lead	5.0	1	0.30	<20	0.90	<20	0.20	<5.0	0.10	<5.0
Magnesium	5000	35	anr							
Manganese	15	.5	anr							
Molybdenum	50	.3	anr							
Nickel	40	.4	anr							
Potassium	10000	200	anr							
Selenium	10	2.4	anr							
Silver	10	.7	anr							
Sodium	10000	500	anr							
Strontium	10	.5	anr							
Thallium	10	1.1	anr							
Tin	50	.9	anr							
Titanium	10	.5	anr							
Vanadium	50	.5	anr							
Zinc	20	3	0.10	<20	0.30	<20	0.20	<20	0.10	<20

(\*) Outside of QC limits  
(anr) Analyte not requested

10.1.2 10

BLANK RESULTS SUMMARY  
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA42152  
Account: CAPEGAA - Cape Environmental Management Inc.  
Project: OB/OD Site I, OB Site II, Fort Bliss, TX

File ID: SB032817M1.ICP      Date Analyzed: 03/28/17      Methods: SW846 6010C  
QC Limits: result < RL      Run ID: MA13933      Units: ug/l

Time: Sample ID:			12:07 CCB4		12:57 CCB5		13:46 CCB6		14:45 CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	14	-1.5	<200	4.2	<200	2.3	<200	8.0	<200
Antimony	6.0	1	-0.20	<6.0	-0.90	<6.0	0.0	<6.0	-0.90	<6.0
Arsenic	10	1.3	anr							
Barium	200	1	anr							
Beryllium	4.0	.2	anr							
Cadmium	4.0	.2	anr							
Calcium	1000	50	anr							
Chromium	10	1	anr							
Cobalt	50	.2	anr							
Copper	25	1	0.40	<25	0.20	<25	0.50	<25	0.50	<25
Iron	300	17	anr							
Lead	5.0	1	0.50	<5.0	0.50	<5.0	0.50	<5.0	0.50	<5.0
Magnesium	5000	35	anr							
Manganese	15	.5	anr							
Molybdenum	50	.3	anr							
Nickel	40	.4	anr							
Potassium	10000	200	anr							
Selenium	10	2.4	anr							
Silver	10	.7	anr							
Sodium	10000	500	anr							
Strontium	10	.5								
Thallium	10	1.1	anr							
Tin	50	.9								
Titanium	10	.5								
Vanadium	50	.5	anr							
Zinc	20	3	0.10	<20	0.10	<20	0.10	<20	0.10	<20

(\*) Outside of QC limits  
(anr) Analyte not requested

10.1.2 10



BLANK RESULTS SUMMARY  
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA42152  
Account: CAPEGAA - Cape Environmental Management Inc.  
Project: OB/OD Site I, OB Site II, Fort Bliss, TX

File ID: SB032817M1.ICP Date Analyzed: 03/28/17 Methods: SW846 6010C  
QC Limits: result < RL Run ID: MA13933 Units: ug/l

Time: Sample ID:	RL	IDL	15:35 CCB8 raw	final	16:19 CCB9 raw	final	17:10 CCB10 raw	final	17:59 CCB11 raw	final
Metal										
Aluminum	200	14	6.3	<200	-1.9	<200	13.7	<200	6.8	<200
Antimony	6.0	1	-0.40	<6.0	0.70	<6.0	1.5	<6.0	1.4	<6.0
Arsenic	10	1.3	anr							
Barium	200	1	anr							
Beryllium	4.0	.2	anr							
Cadmium	4.0	.2	anr							
Calcium	1000	50	anr							
Chromium	10	1	anr							
Cobalt	50	.2	anr							
Copper	25	1	0.0	<25	0.60	<25	0.70	<25	0.70	<25
Iron	300	17	anr							
Lead	5.0	1	0.40	<5.0	0.20	<5.0	0.40	<5.0	1.1	<5.0
Magnesium	5000	35	anr							
Manganese	15	.5	anr							
Molybdenum	50	.3	anr							
Nickel	40	.4	anr							
Potassium	10000	200	anr							
Selenium	10	2.4	anr							
Silver	10	.7	anr							
Sodium	10000	500	anr							
Strontium	10	.5								
Thallium	10	1.1	anr							
Tin	50	.9								
Titanium	10	.5								
Vanadium	50	.5	anr							
Zinc	20	3	0.0	<20	0.10	<20	0.30	<20	0.20	<20

(\*) Outside of QC limits  
(anr) Analyte not requested

10.1.2 10

BLANK RESULTS SUMMARY  
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA42152  
Account: CAPEGAA - Cape Environmental Management Inc.  
Project: OB/OD Site I, OB Site II, Fort Bliss, TX

File ID: SB032817M1.ICP Date Analyzed: 03/28/17 Methods: SW846 6010C  
QC Limits: result < RL Run ID: MA13933 Units: ug/l

Time: Sample ID:			18:50 CCB12		19:39 CCB13		19:47 CCB14		20:30 CCB15	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	14	7.2	<200	5.9	<200	0.10	<200	13.0	<200
Antimony	6.0	1	1.0	<6.0	1.0	<6.0	1.1	<6.0	1.5	<6.0
Arsenic	10	1.3	anr							
Barium	200	1	anr							
Beryllium	4.0	.2	anr							
Cadmium	4.0	.2	anr							
Calcium	1000	50	anr							
Chromium	10	1	anr							
Cobalt	50	.2	anr							
Copper	25	1	0.20	<25	0.60	<25	0.20	<25	0.50	<25
Iron	300	17	anr							
Lead	5.0	1	0.40	<5.0	-0.10	<5.0	0.70	<5.0	0.50	<5.0
Magnesium	5000	35	anr							
Manganese	15	.5	anr							
Molybdenum	50	.3	anr							
Nickel	40	.4	anr							
Potassium	10000	200	anr							
Selenium	10	2.4	anr							
Silver	10	.7	anr							
Sodium	10000	500	anr							
Strontium	10	.5								
Thallium	10	1.1	anr							
Tin	50	.9								
Titanium	10	.5								
Vanadium	50	.5	anr							
Zinc	20	3	0.20	<20	0.30	<20	0.10	<20	0.30	<20

(\*) Outside of QC limits  
(anr) Analyte not requested

10.1.2 10

BLANK RESULTS SUMMARY  
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA42152  
Account: CAPEGAA - Cape Environmental Management Inc.  
Project: OB/OD Site I, OB Site II, Fort Bliss, TX

File ID: SB032817M1.ICP Date Analyzed: 03/28/17 Methods: SW846 6010C  
QC Limits: result < RL Run ID: MA13933 Units: ug/l

Time: Sample ID:	RL	IDL	20:51 CCB16 raw	final
Metal				
Aluminum	200	14	13.9	<200
Antimony	6.0	1	0.50	<6.0
Arsenic	10	1.3	anr	
Barium	200	1	anr	
Beryllium	4.0	.2	anr	
Cadmium	4.0	.2	anr	
Calcium	1000	50	anr	
Chromium	10	1	anr	
Cobalt	50	.2	anr	
Copper	25	1	0.40	<25
Iron	300	17	anr	
Lead	5.0	1	0.10	<5.0
Magnesium	5000	35	anr	
Manganese	15	.5	anr	
Molybdenum	50	.3	anr	
Nickel	40	.4	anr	
Potassium	10000	200	anr	
Selenium	10	2.4	anr	
Silver	10	.7	anr	
Sodium	10000	500	anr	
Strontium	10	.5		
Thallium	10	1.1	anr	
Tin	50	.9		
Titanium	10	.5		
Vanadium	50	.5	anr	
Zinc	20	3	0.20	<20

(\*) Outside of QC limits  
(anr) Analyte not requested

10.1.2 10

CALIBRATION CHECK STANDARDS SUMMARY  
Initial and Continuing Calibration Checks

Login Number: FA42152  
Account: CAPEGAA - Cape Environmental Management Inc.  
Project: OB/OD Site I, OB Site II, Fort Bliss, TX

File ID: SB032817M1.ICP      Date Analyzed: 03/28/17      Methods: SW846 6010C  
QC Limits: 90 to 110 % Recovery      Run ID: MA13933      Units: ug/l

Time:		08:45			09:27			10:21		
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2		
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec	
Aluminum	40000	41300	103.3	40000	39300	98.3	40000	40000	100.0	
Antimony	2000	1960	98.0	2000	1990	99.5	2000	2030	101.5	
Arsenic	anr									
Barium	anr									
Beryllium	anr									
Cadmium	anr									
Calcium	anr									
Chromium	anr									
Cobalt	anr									
Copper	2000	1960	98.0	2000	2000	100.0	2000	2010	100.5	
Iron	anr									
Lead	2000	1960	98.0	2000	1980	99.0	2000	2010	100.5	
Magnesium	anr									
Manganese	anr									
Molybdenum	anr									
Nickel	anr									
Potassium	anr									
Selenium	anr									
Silver	anr									
Sodium	anr									
Strontium	anr									
Thallium	anr									
Tin	anr									
Titanium	anr									
Vanadium	anr									
Zinc	2000	1970	98.5	2000	2010	100.5	2000	2040	102.0	

(\*) Outside of QC limits  
(anr) Analyte not requested

10.1.3  
10

CALIBRATION CHECK STANDARDS SUMMARY  
Initial and Continuing Calibration Checks

Login Number: FA42152  
Account: CAPEGAA - Cape Environmental Management Inc.  
Project: OB/OD Site I, OB Site II, Fort Bliss, TX

File ID: SB032817M1.ICP      Date Analyzed: 03/28/17      Methods: SW846 6010C  
QC Limits: 90 to 110 % Recovery      Run ID: MA13933      Units: ug/l

Time: Sample ID:	CCV	11:11 CCV3		CCV	12:03 CCV4		CCV	12:53 CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	40500	101.3	40000	39900	99.8	40000	40600	101.5
Antimony	2000	2030	101.5	2000	2010	100.5	2000	2040	102.0
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	2000	2020	101.0	2000	1970	98.5	2000	2000	100.0
Iron	anr								
Lead	2000	2000	100.0	2000	1950	97.5	2000	2000	100.0
Magnesium	anr								
Manganese	anr								
Molybdenum	anr								
Nickel	anr								
Potassium	anr								
Selenium	anr								
Silver	anr								
Sodium	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	2000	2040	102.0	2000	2020	101.0	2000	2050	102.5

(\*) Outside of QC limits  
(anr) Analyte not requested

10.1.3  
10

CALIBRATION CHECK STANDARDS SUMMARY  
Initial and Continuing Calibration Checks

Login Number: FA42152  
Account: CAPEGAA - Cape Environmental Management Inc.  
Project: OB/OD Site I, OB Site II, Fort Bliss, TX

File ID: SB032817M1.ICP      Date Analyzed: 03/28/17      Methods: SW846 6010C  
QC Limits: 90 to 110 % Recovery      Run ID: MA13933      Units: ug/l

Time:		13:42			14:41			15:32		
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8		
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec	
Aluminum	40000	40000	100.0	40000	41200	103.0	40000	40200	100.5	
Antimony	2000	2020	101.0	2000	2090	104.5	2000	2030	101.5	
Arsenic	anr									
Barium	anr									
Beryllium	anr									
Cadmium	anr									
Calcium	anr									
Chromium	anr									
Cobalt	anr									
Copper	2000	1970	98.5	2000	2040	102.0	2000	2020	101.0	
Iron	anr									
Lead	2000	1950	97.5	2000	2020	101.0	2000	2010	100.5	
Magnesium	anr									
Manganese	anr									
Molybdenum	anr									
Nickel	anr									
Potassium	anr									
Selenium	anr									
Silver	anr									
Sodium	anr									
Strontium										
Thallium	anr									
Tin										
Titanium										
Vanadium	anr									
Zinc	2000	2020	101.0	2000	2080	104.0	2000	2050	102.5	

(\*) Outside of QC limits  
(anr) Analyte not requested

10.1.3  
10

CALIBRATION CHECK STANDARDS SUMMARY  
Initial and Continuing Calibration Checks

Login Number: FA42152  
Account: CAPEGAA - Cape Environmental Management Inc.  
Project: OB/OD Site I, OB Site II, Fort Bliss, TX

File ID: SB032817M1.ICP      Date Analyzed: 03/28/17      Methods: SW846 6010C  
QC Limits: 90 to 110 % Recovery      Run ID: MA13933      Units: ug/l

Time:		16:03			16:11			17:06		
Sample ID:	ICV	ICV2		CCV	CCV9		CCV	CCV10		
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec	
Aluminum	40000	41500	103.8	40000	39100	97.8	40000	39500	98.8	
Antimony	2000	1990	99.5	2000	1980	99.0	2000	1990	99.5	
Arsenic	anr									
Barium	anr									
Beryllium	anr									
Cadmium	anr									
Calcium	anr									
Chromium	anr									
Cobalt	anr									
Copper	2000	1960	98.0	2000	1960	98.0	2000	1990	99.5	
Iron	anr									
Lead	2000	1960	98.0	2000	1950	97.5	2000	1990	99.5	
Magnesium	anr									
Manganese	anr									
Molybdenum	anr									
Nickel	anr									
Potassium	anr									
Selenium	anr									
Silver	anr									
Sodium	anr									
Strontium										
Thallium	anr									
Tin										
Titanium										
Vanadium	anr									
Zinc	2000	1990	99.5	2000	2000	100.0	2000	2030	101.5	

(\*) Outside of QC limits  
(anr) Analyte not requested

10.1.3  
10

CALIBRATION CHECK STANDARDS SUMMARY  
Initial and Continuing Calibration Checks

Login Number: FA42152  
Account: CAPEGAA - Cape Environmental Management Inc.  
Project: OB/OD Site I, OB Site II, Fort Bliss, TX

File ID: SB032817M1.ICP      Date Analyzed: 03/28/17      Methods: SW846 6010C  
QC Limits: 90 to 110 % Recovery      Run ID: MA13933      Units: ug/l

Time:		17:55			18:46			19:35		
Sample ID:	CCV	CCV11		CCV	CCV12		CCV	CCV13		
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec	
Aluminum	40000	39700	99.3	40000	39300	98.3	40000	39400	98.5	
Antimony	2000	1970	98.5	2000	1950	97.5	2000	1940	97.0	
Arsenic	anr									
Barium	anr									
Beryllium	anr									
Cadmium	anr									
Calcium	anr									
Chromium	anr									
Cobalt	anr									
Copper	2000	2010	100.5	2000	2020	101.0	2000	2030	101.5	
Iron	anr									
Lead	2000	2030	101.5	2000	2050	102.5	2000	2070	103.5	
Magnesium	anr									
Manganese	anr									
Molybdenum	anr									
Nickel	anr									
Potassium	anr									
Selenium	anr									
Silver	anr									
Sodium	anr									
Strontium										
Thallium	anr									
Tin										
Titanium										
Vanadium	anr									
Zinc	2000	2040	102.0	2000	2040	102.0	2000	2050	102.5	

(\*) Outside of QC limits  
(anr) Analyte not requested

10.1.3  
10



CALIBRATION CHECK STANDARDS SUMMARY  
Initial and Continuing Calibration Checks

Login Number: FA42152  
Account: CAPEGAA - Cape Environmental Management Inc.  
Project: OB/OD Site I, OB Site II, Fort Bliss, TX

File ID: SB032817M1.ICP      Date Analyzed: 03/28/17      Methods: SW846 6010C  
QC Limits: 90 to 110 % Recovery      Run ID: MA13933      Units: ug/l

Time:		19:43		20:26		20:47			
Sample ID:	CCV	CCV14		CCV	CCV15		CCV	CCV16	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	40000	38700	96.8	40000	40300	100.8	40000	39500	98.8
Antimony	2000	1910	95.5	2000	1990	99.5	2000	1940	97.0
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	2000	1980	99.0	2000	2030	101.5	2000	2010	100.5
Iron	anr								
Lead	2000	2030	101.5	2000	2090	104.5	2000	2050	102.5
Magnesium	anr								
Manganese	anr								
Molybdenum	anr								
Nickel	anr								
Potassium	anr								
Selenium	anr								
Silver	anr								
Sodium	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	2000	2010	100.5	2000	2090	104.5	2000	2050	102.5

(\*) Outside of QC limits  
(anr) Analyte not requested

10.1.3  
10

## HIGH STANDARD CHECK SUMMARY

Login Number: FA42152

Account: CAPEGAA - Cape Environmental Management Inc.

Project: OB/OD Site I, OB Site II, Fort Bliss, TX

File ID: SB032817M1.ICP  
QC Limits: 95 to 105 % RecoveryDate Analyzed: 03/28/17  
Run ID: MA13933Methods: SW846 6010C  
Units: ug/l

Time:	08:38		
Sample ID:	HSTD	HSTD1	
Metal	True	Results	% Rec
Aluminum	80000	78700	98.4
Antimony	4000	3970	99.3
Arsenic	anr		
Barium	anr		
Beryllium	anr		
Cadmium	anr		
Calcium	anr		
Chromium	anr		
Cobalt	anr		
Copper	4000	3920	98.0
Iron	anr		
Lead	4000	3930	98.3
Magnesium	anr		
Manganese	anr		
Molybdenum	anr		
Nickel	anr		
Potassium	anr		
Selenium	anr		
Silver	anr		
Sodium	anr		
Strontium	anr		
Thallium	anr		
Tin	anr		
Titanium	anr		
Vanadium	anr		
Zinc	4000	3900	97.5

(\*) Outside of QC limits

(anr) Analyte not requested

10.1.4 10

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: FA42152

Account: CAPEGAA - Cape Environmental Management Inc.

Project: OB/OD Site I, OB Site II, Fort Bliss, TX

File ID: SB032817M1.ICP Date Analyzed: 03/28/17 Methods: SW846 6010C  
QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA13933 Units: ug/l

Time:			09:08		20:35	
Sample ID:	CRI	CRIA	CRIA1		CRIA2	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	400	200	196	98.0	206	103.0
Antimony	10	5.0	4.5	90.0	6.2	124.0
Arsenic	20	10	anr			
Barium	400	200	anr			
Beryllium	10	5.0	anr			
Cadmium	10	5.0	anr			
Calcium	2000	1000	anr			
Chromium	20	10	anr			
Cobalt	100	50	anr			
Copper	50	25	25.9	103.6	26.8	107.2
Iron	600	300	anr			
Lead	10	5.0	5.1	102.0	5.4	108.0
Magnesium	10000	5000	anr			
Manganese	30	15	anr			
Molybdenum	100	50	anr			
Nickel	80	40	anr			
Potassium	20000	10000	anr			
Selenium	20	10	anr			
Silver	20	10	anr			
Sodium	20000	10000	anr			
Strontium	20	10	anr			
Thallium	20	10	anr			
Tin	100	50	anr			
Titanium	20	10	anr			
Vanadium	100	50	anr			
Zinc	40	20	21.3	106.5	21.7	108.5

(\*) Outside of QC limits  
(anr) Analyte not requested

10.1.5 10

INTERFERING ELEMENT CHECK STANDARDS SUMMARY  
Part 1 - ICSA and ICSAB Standards

Login Number: FA42152  
Account: CAPEGAA - Cape Environmental Management Inc.  
Project: OB/OD Site I, OB Site II, Fort Bliss, TX

File ID: SB032817M1.ICP      Date Analyzed: 03/28/17      Methods: SW846 6010C  
QC Limits: 80 to 120 % Recovery      Run ID: MA13933      Units: ug/l

Time:	Sample ID:	ICSA	ICSAB	09:15		09:20		20:39		20:43	
		True	True	ICSA1	% Rec	ICSAB1	% Rec	ICSA2	% Rec	ICSAB2	% Rec
Metal				Results		Results		Results		Results	
Aluminum	500000	500000	500000	500000	100.0	499000	99.8	490000	98.0	494000	98.8
Antimony			1000	-0.90		1010	101.0	-0.60		958	95.8
Arsenic			1000	0.40		1080	108.0	3.0		1030	103.0
Barium			500	-0.50		502	100.4	-0.20		509	101.8
Beryllium			500	-0.10		485	97.0	0.10		493	98.6
Cadmium			1000	-0.40		942	94.2	-1.3		875	87.5
Calcium	500000	500000	480000	96.0		474000	94.8	474000	94.8	462000	92.4
Chromium			500	0.50		496	99.2	0.80		484	96.8
Cobalt			500	0.20		472	94.4	0.10		438	87.6
Copper			500	-0.20		517	103.4	0.10		513	102.6
Iron	200000	200000	182000	91.0		178000	89.0	183000	91.5	180000	90.0
Lead			1000	0.0		954	95.4	2.7		971	97.1
Magnesium	500000	500000	495000	99.0		498000	99.6	501000	100.2	505000	101.0
Manganese			500	0.20		485	97.0	0.10		495	99.0
Molybdenum			1000	-0.20		990	99.0	1.0		956	95.6
Nickel			1000	-0.20		944	94.4	0.70		904	90.4
Potassium				69.1		75.7		178		104	
Selenium			1000	0.20		1000	100.0	-0.40		952	95.2
Silver			1000	0.10		931	93.1	0.20		903	90.3
Sodium				163		180		296		227	
Strontium			1000	-0.10		1010	101.0	1.4		1030	103.0
Thallium			1000	0.80		951	95.1	-1.9		951	95.1
Tin			1000	2.6 (a)		938	93.8	3.6		893	89.3
Titanium			1000	-0.60		986	98.6	-0.30		982	98.2
Vanadium			500	-0.20		475	95.0	0.0		467	93.4
Zinc			1000	1.6		938	93.8	1.6		935	93.5

(\*) Outside of QC limits  
(anr) Analyte not requested  
(a) Verified trace level impurity.

10.1.6 10

BLANK RESULTS SUMMARY  
Part 2 - Method Blanks

Login Number: FA42152  
Account: CAPEGAA - Cape Environmental Management Inc.  
Project: OB/OD Site I, OB Site II, Fort Bliss, TX

QC Batch ID: MP31871  
Matrix Type: SOLID

Methods: SW846 6010C  
Units: mg/kg

Prep Date: 03/28/17

Metal	RL	IDL	MDL	MB raw	final
Aluminum	10	.7	1.8	0.54	<10
Antimony	1.0	.05	.065	-0.035	<1.0
Arsenic	0.50	.065	.1		
Barium	10	.05	.05		
Beryllium	0.25	.01	.025		
Cadmium	0.20	.01	.025		
Calcium	250	2.5	2.5		
Chromium	0.50	.05	.05		
Cobalt	2.5	.01	.025		
Copper	1.3	.05	.05	0.020	<1.3
Iron	15	.85	.85		
Lead	1.0	.05	.05	0.020	<1.0
Magnesium	250	1.8	1.8		
Manganese	0.75	.025	.025		
Molybdenum	2.5	.015	.025		
Nickel	2.0	.02	.025		
Potassium	500	10	10		
Selenium	1.0	.12	.12		
Silver	0.50	.035	.041		
Sodium	500	25	25		
Strontium	0.50	.025	.025		
Thallium	0.50	.055	.055		
Tin	2.5	.045	.045		
Titanium	0.50	.025	.025		
Vanadium	2.5	.025	.025		
Zinc	1.0	.15	.15	0.11	<1.0

Associated samples MP31871: FA42152-1, FA42152-2, FA42152-3, FA42152-9

Results < IDL are shown as zero for calculation purposes  
(\*) Outside of QC limits  
(anr) Analyte not requested

## SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA42152

Account: CAPEGAA - Cape Environmental Management Inc.  
Project: OB/OD Site I, OB Site II, Fort Bliss, TXQC Batch ID: MP31871  
Matrix Type: SOLIDMethods: SW846 6010C  
Units: mg/kg

Prep Date: 03/28/17

Metal	BSP Result	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum	1340	1350	99.3	80-120
Antimony	24.7	25	98.8	80-120
Arsenic				
Barium				
Beryllium				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper	12.5	12.5	100.0	80-120
Iron				
Lead	23.8	25	95.2	80-120
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc	24.7	25	98.8	80-120

Associated samples MP31871: FA42152-1, FA42152-2, FA42152-3, FA42152-9

Results &lt; IDL are shown as zero for calculation purposes

(\*) Outside of QC limits

(anr) Analyte not requested

10.2.2 10

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA42152  
 Account: CAPEGAA - Cape Environmental Management Inc.  
 Project: OB/OD Site I, OB Site II, Fort Bliss, TX

QC Batch ID: MP31871  
 Matrix Type: SOLID

Methods: SW846 6010C  
 Units: ug/l

Prep Date: 03/28/17

Metal	FA42067-5		%DIF	QC Limits
	Original	SDL 1:5		
Aluminum	107000	122000	13.7*(a)	0-10
Antimony	1.60	5.90	268.8(b)	0-10
Arsenic				
Barium				
Beryllium				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper	179	206	15.3*(a)	0-10
Iron				
Lead	232	236	1.4	0-10
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc	373	460	23.2*(a)	0-10

Associated samples MP31871: FA42152-1, FA42152-2, FA42152-3, FA42152-9

Results < IDL are shown as zero for calculation purposes

(\*) Outside of QC limits

(anr) Analyte not requested

(a) Serial dilution indicates possible matrix interference. Outside DoD QSM control limits.

(b) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

POST DIGESTATE SPIKE SUMMARY

Login Number: FA42152  
 Account: CAPEGAA - Cape Environmental Management Inc.  
 Project: OB/OD Site I, OB Site II, Fort Bliss, TX

QC Batch ID: MP31871  
 Matrix Type: SOLID

Methods: SW846 6010C  
 Units: ug/l

Prep Date:

03/28/17

Metal	Sample ml	Final ml	FA42067-5 Raw	PS Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum	9.8	10	107200	105056	109500	0.2	125	2500	177.8*(a)	80-120
Antimony	9.8	10	1.6	1.568	88.3	0.2	5	100	86.7	80-120
Arsenic										
Barium										
Beryllium										
Cadmium										
Calcium										
Chromium										
Cobalt										
Copper	9.8	10	178.8	175.224	265.6	0.2	5	100	90.4	80-120
Iron										
Lead	9.8	10	232.3	227.654	284.2	0.2	2.5	50	113.1	80-120
Magnesium										
Manganese										
Molybdenum										
Nickel										
Potassium										
Selenium										
Silver										
Sodium										
Strontium										
Thallium										
Tin										
Titanium										
Vanadium										
Zinc	9.8	10	373.4	365.932	574.4	0.2	12.5	250	83.4	80-120

Associated samples MP31871: FA42152-1, FA42152-2, FA42152-3, FA42152-9

Results < IDL are shown as zero for calculation purposes

(\*) Outside of QC limits

(\*\*) Corr. sample result = Raw \* (sample volume / final volume)

(anr) Analyte not requested

(a) Spike recovery indicates matrix interference and/or outside control limits due to high level in sample relative to spike amount. Outsid DoD QSM control limits.



## Instrument Detection Limits

Page 1 of 1

**Job Number:** FA42152

**Account:** CAPEGAA Cape Environmental Management Inc.

**Project:** OB/OD Site I, OB Site II, Fort Bliss, TX

**Instrument ID:** SSTRACE2

**Effective Date:** 01/27/15

Analyte	IDL ug/l
Aluminum	14
Antimony	1
Arsenic	1.3
Barium	1
Beryllium	.2
Cadmium	.2
Calcium	50
Chromium	1
Cobalt	.2
Copper	1
Iron	17
Lead	1
Magnesium	35
Manganese	.5
Molybdenum	.3
Nickel	.4
Potassium	200
Selenium	2.4
Silicon	5
Silver	.7
Sodium	500
Strontium	.5
Sulfur	5
Thallium	1.1
Tin	.9
Titanium	.5
Vanadium	.5
Zinc	3

The above applies to the following instrument runs:

MA13933

## Instrument Linear Ranges

Page 1 of 1

**Job Number:** FA42152

**Account:** CAPEGAA Cape Environmental Management Inc.

**Project:** OB/OD Site I, OB Site II, Fort Bliss, TX

**Instrument ID:** SSTRACE2

**Effective Date:** 10/22/10

Analyte	Linear Range ug/l
Aluminum	500000
Antimony	10000
Arsenic	10000
Barium	10000
Beryllium	10000
Cadmium	10000
Calcium	500000
Chromium	10000
Cobalt	10000
Copper	10000
Iron	500000
Lead	10000
Magnesium	500000
Manganese	10000
Molybdenum	10000
Nickel	10000
Potassium	80000
Selenium	10000
Silver	1000
Sodium	80000
Strontium	10000
Thallium	10000
Tin	10000
Titanium	10000
Vanadium	10000
Zinc	10000

The above applies to the following instrument runs:  
MA13933

Metals Analysis

Raw Data

Zoom In  
Zoom Out

Sample Name: Blank Acquired: 3/28/2017 8:17:23 Type: Cal  
Method: 60102007\_041712(v607) Mode: IR Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0006	-0.0042	-0.0002	.0170	.0005	.0048	-0.0009	.0002	.0002
Stddev	.0001	.0009	.0000	.0004	.0007	.0004	.0001	.0002	.0002
%RSD	13.54	21.43	14.68	2.081	144.8	9.237	13.65	119.7	92.88
#1	.0005	-.0037	-.0002	.0171	.0012	.0051	-.0007	-.0001	.0004
#2	.0007	-.0052	-.0002	.0167	.0006	.0043	-.0009	.0005	.0000
#3	.0007	-.0036	-.0002	.0174	-.0003	.0051	-.0010	.0000	.0002
Elem	Cu3247	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0034	.0018	-.0031	-.0002	.0002	.0012	-.0133	-.0008	.0011
Stddev	.0001	.0007	.0016	.0003	.0002	.0002	.0025	.0004	.0004
%RSD	1.685	37.89	51.64	144.8	98.35	19.38	19.12	51.90	41.01
#1	.0034	.0024	-.0039	-.0001	.0000	.0014	-.0152	-.0011	.0013
#2	.0034	.0011	-.0042	.0000	.0003	.0012	-.0104	-.0003	.0014
#3	.0035	.0019	-.0013	-.0005	.0002	.0010	-.0143	-.0010	.0006
Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0002	-.0013	.0036	.0004	-.0002	.0018	-.0033	-.0001	.0026
Stddev	.0001	.0002	.0001	.0001	.0008	.0001	.0004	.0001	.0001
%RSD	60.31	11.89	2.795	19.39	432.4	7.986	10.80	84.24	2.351
#1	.0002	-.0012	.0035	.0003	-.0006	.0020	-.0029	-.0002	.0026
#2	.0001	-.0013	.0037	.0004	.0008	.0018	-.0035	-.0001	.0025
#3	.0004	-.0015	.0036	.0005	-.0008	.0018	-.0035	.0000	.0026
Int. Std.	In2306	Y_2243	Y_3600	Y_3710					
Units	Cts/S	Cts/S	Cts/S	Cts/S					
Avg	2833.6	6349.7	47575.6	5947.6					
Stddev	3.5	17.3	255.3	33.4					
%RSD	.12321	.27268	.53521	.56156					
#1	2835.6	6367.5	47865.6	5914.0					
#2	2835.7	6348.6	47389.6	5948.0					
#3	2829.6	6332.9	47472.6	5980.8					

Raw Data MA13933 page 1 of 198

Zoom In  
Zoom Out

Sample Name: LowStd Acquired: 3/28/2017 8:25:47 Type: Cal  
Method: 60102007\_041712(v607) Mode: IR Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0299	1.655	.1137	5.084	4.228	2.920	2.624	1.253	.2396	.3504
Stddev	.0000	.014	.0005	.033	.023	.014	.009	.004	.0010	.0006
%RSD	.1203	.8486	.4706	.6449	.5491	.4918	.3424	.3457	.4352	.1576
#1	.0299	1.671	.1132	5.122	4.253	2.936	2.614	1.248	.2385	.3509
#2	.0299	1.646	.1137	5.063	4.206	2.909	2.632	1.257	.2405	.3505
#3	.0299	1.649	.1142	5.067	4.226	2.915	2.624	1.252	.2397	.3498
Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.845	1.259	.2962	1.331	.5701	4.260	.7667	.5631	.1289	.0804
Stddev	.008	.008	.0018	.001	.0018	.024	.0033	.0015	.0004	.0003
%RSD	.4536	.6179	.6067	.0427	.3102	.5674	.4255	.2649	.2867	.3270
#1	1.854	1.267	.2972	1.331	.5682	4.288	.7636	.5619	.1287	.0801
#2	1.838	1.251	.2941	1.332	.5716	4.247	.7701	.5648	.1294	.0807
#3	1.844	1.259	.2973	1.331	.5707	4.245	.7664	.5626	.1288	.0804
Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062			
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S			
Avg	.2365	.2850	7.400	.7868	.2537	.3354	1.584			
Stddev	.0006	.0012	.038	.0035	.0010	.0009	.006			
%RSD	.2559	.4351	.5108	.4449	.3991	.2674	.3975			
#1	.2360	.2835	7.441	.7859	.2540	.3344	1.577			
#2	.2372	.2857	7.368	.7907	.2546	.3360	1.588			
#3	.2362	.2857	7.390	.7839	.2526	.3358	1.586			
Int. Std.	In2306	Y_2243	Y_3600	Y_3710						
Units	Cts/S	Cts/S	Cts/S	Cts/S						
Avg	2610.1	6162.6	45863.6	5934.8						
Stddev	7.1	20.8	117.3	31.2						
%RSD	.27167	.33757	.25498	.52646						
#1	2614.1	6186.3	45986.6	5934.0						
#2	2601.9	6147.0	45753.6	5966.4						
#3	2614.2	6154.6	45850.6	5903.9						

Raw Data MA13933 page 2 of 198

Zoom In  
Zoom Out

Sample Name: MidStd Acquired: 3/28/2017 8:29:58 Type: Cal  
Method: 60102007\_041712(v607) Mode: IR Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.1185	6.107	.4462	19.79	16.25	10.64	9.920	4.720	.9187	1.358
Stddev	.0003	.004	.0008	.04	.02	.01	.006	.005	.0007	.006
%RSD	.2878	.0725	.1864	.2093	.1217	.1327	.0590	.1175	.0815	.4197
#1	.1187	6.109	.4453	19.84	16.24	10.63	9.913	4.714	.9196	1.363
#2	.1181	6.110	.4462	19.78	16.28	10.66	9.925	4.720	.9181	1.352
#3	.1187	6.102	.4470	19.76	16.24	10.64	9.922	4.725	.9185	1.360
Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6.516	4.667	1.087	5.146	2.161	15.62	2.907	2.225	.5022	.3172
Stddev	.011	.012	.001	.004	.001	.01	.000	.005	.0012	.0003
%RSD	.1731	.2465	.1135	.0761	.0599	.0655	.0138	.2425	.2406	.1064
#1	6.513	4.680	1.086	5.150	2.159	15.63	2.906	2.231	.5010	.3169
#2	6.528	4.663	1.087	5.144	2.161	15.62	2.907	2.225	.5034	.3172
#3	6.506	4.658	1.088	5.143	2.162	15.61	2.907	2.220	.5023	.3175
Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062			
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S			
Avg	.7180	1.094	28.93	3.114	.9986	1.313	6.019			
Stddev	.0007	.000	.07	.009	.0026	.002	.002			
%RSD	.1008	.0346	.2453	.2947	.2578	.1651	.0274			
#1	.7172	1.094	28.99	3.125	1.001	1.315	6.021			
#2	.7187	1.094	28.95	3.107	.9982	1.311	6.018			
#3	.7182	1.094	28.85	3.112	.9963	1.312	6.020			
Int. Std.	In2306	Y_2243	Y_3600	Y_3710						
Units	Cts/S	Cts/S	Cts/S	Cts/S						
Avg	2400.5	5968.9	44067.6	5844.2						
Stddev	.6	9.6	136.6	45.5						
%RSD	.02575	.16010	.30926	.77880						
#1	2400.4	5980.3	44018.6	5878.5						
#2	2400.0	5967.8	43962.6	5861.5						
#3	2401.2	5961.6	44221.6	5792.6						

Raw Data MA13933 page 3 of 198

Zoom In  
Zoom Out

Sample Name: HighStd Acquired: 3/28/2017 8:33:55 Type: Cal  
Method: 60102007\_041712(v607) Mode: IR Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.2389	12.37	.9091	39.29	31.79	21.27	19.93	9.519	1.819	2.706
Stddev	.0005	.03	.0005	.08	.12	.03	.04	.019	.003	.002
%RSD	.2250	.2458	.0524	.1973	.3715	.1241	.2185	.1991	.1458	.0801
#1	.2383	12.40	.9086	39.35	31.87	21.29	19.89	9.499	1.817	2.707
#2	.2389	12.36	.9093	39.31	31.85	21.28	19.92	9.519	1.817	2.703
#3	.2394	12.34	.9095	39.20	31.66	21.24	19.97	9.537	1.822	2.707
Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	12.81	9.400	2.165	9.939	4.210	31.34	5.772	4.460	1.023	.6450
Stddev	.04	.018	.004	.044	.003	.03	.007	.002	.001	.0007
%RSD	.3021	.1959	.1755	.4436	.0634	.1075	.1188	.0453	.0823	.1022
#1	12.85	9.418	2.169	9.889	4.211	31.38	5.770	4.462	1.024	.6446
#2	12.81	9.402	2.164	9.971	4.207	31.32	5.767	4.458	1.023	.6448
#3	12.77	9.381	2.162	9.957	4.212	31.32	5.780	4.460	1.022	.6458
Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062			
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S			
Avg	1.391	2.170	55.79	6.041	1.979	2.568	11.81			
Stddev	.001	.004	.84	.051	.005	.003	.03			
%RSD	.0952	.1755	1.513	.8363	.2338	.1272	.2310			
#1	1.390	2.169	55.49	6.018	1.982	2.568	11.82			
#2	1.392	2.167	56.75	6.099	1.974	2.564	11.78			
#3	1.390	2.174	55.14	6.006	1.981	2.571	11.84			
Int. Std.	h2306	Y_2243	Y_3600	Y_3710						
Units	Cts/S	Cts/S	Cts/S	Cts/S						
Avg	2208.5	5629.5	42231	5852.0						
Stddev	3.3	9.4	168.	23.9						
%RSD	.14750	.16674	.39888	.40852						
#1	2212.0	5636.2	42396.	5832.1						
#2	2207.6	5633.4	42237.	5878.5						
#3	2205.7	5618.8	42059.	5845.2						

Sample Name: HSTD Acquired: 3/28/2017 8:38:30 Type: QC  
Method: 60102007\_041712(v607) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4978	78.70	3.978	3.891	3.834	78.31	3.971	3.977	3.939	3.918
Stddev	.0015	.20	.002	.005	.011	.23	.007	.005	.006	.012
%RSD	.2951	.2500	.0598	.1320	.2763	.2943	.1824	.1381	.1496	.2980
#1	4976	78.53	3.976	3.895	3.824	78.05	3.966	3.973	3.932	3.921
#2	4964	78.66	3.981	3.885	3.834	78.38	3.968	3.974	3.942	3.905
#3	4993	78.91	3.977	3.893	3.845	78.49	3.980	3.983	3.943	3.928

Check ? Chk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk Pass  
Value  
Range

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	76.66	77.49	77.68	3.845	3.899	78.14	3.933	3.932	3.972	3.967
Stddev	.16	.14	.49	.021	.004	.22	.004	.003	.002	.009
%RSD	.2058	.1832	.6343	.5464	.1116	.2832	.0901	.0835	.0423	.2227
#1	76.51	77.49	77.12	3.857	3.894	77.90	3.930	3.933	3.972	3.975
#2	76.66	77.34	77.86	3.857	3.900	78.19	3.933	3.934	3.973	3.958
#3	76.82	77.63	78.06	3.821	3.902	78.33	3.937	3.928	3.970	3.970

Check ? Chk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk Pass  
Value  
Range

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.824	3.946	3.854	3.886	3.913	3.911	3.898
Stddev	.004	.007	.033	.020	.011	.009	.011
%RSD	.1140	.1858	.8520	.5257	.2844	.2268	.2899
#1	3.820	3.940	3.886	3.905	3.912	3.903	3.888
#2	3.828	3.944	3.820	3.888	3.924	3.909	3.895
#3	3.824	3.954	3.856	3.864	3.902	3.920	3.910

Check ? None Chk PassChk PassChk PassChk PassChk PassChk Pass  
Value  
Range

Raw Data MA13933 page 5 of 198

Sample Name: HSTD Acquired: 3/28/2017 8:38:30 Type: QC  
Method: 60102007\_041712(v607) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2229.5	5662.5	42642.	5929.6
Stddev	4.5	7.4	117.	30.9
%RSD	.20055	.12996	.27485	.52192
#1	2227.9	5671.0	42745.	5962.8
#2	2226.0	5658.7	42667.	5924.6
#3	2234.5	5657.8	42514.	5901.5

Raw Data MA13933 page 6 of 198

Sample Name: ICV Acquired: 3/28/2017 8:45:48 Type: QC  
Method: 60102007\_041712(v607) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2462	41.32	1.966	1.965	1.984	42.43	1.962	1.962	1.961	1.956
Stddev	.0004	.10	.001	.007	.010	.10	.007	.005	.004	.006
%RSD	.1511	.2458	.0552	.3360	.5260	.2301	.3551	.2607	.1929	.2892
#1	2462	41.21	1.966	1.957	1.972	42.32	1.970	1.968	1.957	1.950
#2	2467	41.41	1.966	1.969	1.992	42.51	1.961	1.961	1.964	1.959
#3	2459	41.34	1.964	1.969	1.988	42.45	1.956	1.958	1.962	1.961

Check ? Chk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk Pass  
Value  
Range

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	40.53	41.47	42.10	1.988	2.033	41.27	1.967	1.956	1.964	1.963
Stddev	.19	.15	.12	.007	.002	.07	.004	.006	.001	.002
%RSD	.4570	.3547	.2939	.3591	.1197	.1765	.2107	.2888	.0705	.0742
#1	40.34	41.31	41.96	1.980	2.036	41.20	1.971	1.960	1.965	1.964
#2	40.70	41.53	42.14	1.991	2.031	41.34	1.965	1.958	1.965	1.965
#3	40.55	41.59	42.20	1.993	2.032	41.28	1.964	1.949	1.963	1.962

Check ? Chk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk Pass  
Value  
Range

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.185	1.984	1.991	2.012	2.038	2.023	1.968
Stddev	.0013	.006	.011	.006	.007	.004	.005
%RSD	.4185	.3066	.5742	.3138	.3273	.2214	.2448
#1	3.194	1.989	1.978	2.005	2.044	2.018	1.974
#2	3.190	1.986	1.999	2.017	2.038	2.026	1.966
#3	3.169	1.978	1.995	2.015	2.031	2.025	1.965

Check ? None Chk PassChk PassChk PassChk PassChk PassChk Pass  
Value  
Range

Raw Data MA13933 page 7 of 198

Sample Name: ICV Acquired: 3/28/2017 8:45:48 Type: QC  
Method: 60102007\_041712(v607) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2421.6	6014.3	44755.	5936.0
Stddev	4.6	13.3	154.	11.6
%RSD	.19122	.22163	.34455	.19585
#1	2416.4	6000.1	44927.	5948.6
#2	2423.4	6026.6	44629.	5925.8
#3	2425.1	6016.2	44710.	5933.6

Raw Data MA13933 page 8 of 198

[Zoom In](#)  
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Sample Name: ICB Acquired: 3/28/2017 8:54:50 Type: QC  
Method: 60102007\_041712(v607) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	.0084	-.0004	.0000	.0002	.0018	.0001	.0001	.0002	.0003
Stddev	.0003	.0133	.0009	.0001	.0000	.0024	.0001	.0001	.0002	.0001
%RSD	133.3	157.5	221.7	254.3	10.45	138.5	48.94	57.96	110.5	26.76
#1	.0000	.0179	.0002	.0001	.0002	.0000	.0002	.0001	.0003	.0004
#2	-.0005	-.0067	.0001	.0001	.0002	.0007	.0001	.0002	.0004	.0002
#3	-.0001	.0141	-.0014	-.0001	.0002	.0046	.0001	.0000	-.0001	.0003

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0007	.0301	-.0010	.0002	-.0002	.0135	.0001	.0003	-.0001	.0006
Stddev	.0024	.0210	.0083	.0000	.0001	.0023	.0001	.0003	.0003	.0009
%RSD	355.0	69.66	817.3	10.43	53.78	16.95	112.2	109.0	265.1	147.8
#1	-.0012	.0541	.0067	.0002	-.0001	.0131	.0002	.0003	.0002	.0016
#2	.0020	.0155	-.0098	.0002	-.0003	.0160	.0000	.0006	-.0002	-.0001
#3	-.0028	.0207	.0001	.0002	-.0003	.0114	.0001	.0000	-.0004	.0003

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	.0000	.0003	.0001	-.0004	.0002	.0001
Stddev	.0002	.000	.0001	.0001	.0006	.0001	.0000
%RSD	24.16	361.9	18.81	194.6	128.5	54.93	29.67
#1	.0005	.0001	.0003	.0001	.0002	.0001	.0001
#2	.0007	-.0002	.0002	.0002	-.0005	.0003	.0002
#3	.0008	.0000	.0003	-.0001	-.0010	.0002	.0001

Check ? None Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Raw Data MA13933 page 9 of 198

[Zoom In](#)  
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Sample Name: CRIA Acquired: 3/28/2017 9:08:54 Type: QC  
Method: 60102007\_041712(v607) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F.0080	.1960	.0097	.2032	.0050	1.041	.0053	.0540	.0104
Stddev	.0004	.0080	.0002	.0009	.0000	.006	.0001	.0002	.0004
%RSD	4.555	4.083	2.003	.4361	.7498	.5346	1.523	.3018	4.219
#1	.0081	.2020	.0095	.2032	.0050	1.037	.0053	.0538	.0102
#2	.0076	.1991	.0096	.2023	.0049	1.038	.0054	.0539	.0102
#3	.0083	.1869	.0099	.2040	.0050	1.047	.0053	.0541	.0109

Check ? Chk Fail Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
Value .0100  
Range -20.00%

Elem	Cu3247	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0259	.3076	10.17	5.169	.0157	.0527	10.41	.0425	.0051
Stddev	.0004	.0026	.02	.021	.0000	.0000	.03	.0002	.0005
%RSD	1.576	.8562	.1688	.4076	.0477	.0701	.2748	.4026	9.401
#1	.0263	.3097	10.17	5.164	.0157	.0527	10.42	.0427	.0056
#2	.0260	.3084	10.16	5.192	.0157	.0527	10.38	.0423	.0049
#3	.0255	.3046	10.19	5.150	.0157	.0527	10.43	.0425	.0047

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
Value  
Range

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0045	.0105	.0056	.0559	.0101	.0099	.0086	.0499	.0213
Stddev	.0001	.0019	.0002	.0002	.0002	.0001	.0003	.0002	.0000
%RSD	3.299	17.54	3.025	.3926	1.600	1.257	3.022	.4108	.2252
#1	.0046	.0097	.0054	.0556	.0100	.0101	.0084	.0499	.0213
#2	.0046	.0093	.0057	.0559	.0100	.0099	.0086	.0500	.0213
#3	.0043	.0127	.0056	.0561	.0103	.0098	.0089	.0496	.0214

Check ? Chk Pass Chk Pass None Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
Value  
Range

Raw Data MA13933 page 11 of 198

[Zoom In](#)  
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Sample Name: ICB Acquired: 3/28/2017 8:54:50 Type: QC  
Method: 60102007\_041712(v607) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2802.3	6169.3	46778.	5970.3
Stddev	5.3	9.9	153.	53.7
%RSD	.19036	.16077	.32600	.89865
#1	2803.6	6180.1	46866.	6032.2
#2	2796.5	6160.5	46867.	5941.1
#3	2806.9	6167.5	46602.	5937.6

#1 2803.6 6180.1 46866. 6032.2  
#2 2796.5 6160.5 46867. 5941.1  
#3 2806.9 6167.5 46602. 5937.6

Raw Data MA13933 page 10 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: CRIA Acquired: 3/28/2017 9:08:54 Type: QC  
Method: 60102007\_041712(v607) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2667.2	6028.0	46285.	5961.5
Stddev	6.0	9.9	33.	72.8
%RSD	.22447	.16461	.07130	1.2217
#1	2671.4	6038.5	46250.	6017.8
#2	2660.4	6026.5	46291.	5987.4
#3	2669.9	6018.8	46315.	5879.3

Int. Std. In2306 Y\_2243 Y\_3600 Y\_3710  
Units Cts/S Cts/S Cts/S Cts/S  
Avg 2667.2 6028.0 46285. 5961.5  
Stddev 6.0 9.9 33. 72.8  
%RSD .22447 .16461 .07130 1.2217

#1 2671.4 6038.5 46250. 6017.8  
#2 2660.4 6026.5 46291. 5987.4  
#3 2669.9 6018.8 46315. 5879.3

Raw Data MA13933 page 12 of 198

Sample Name: ICSA		Acquired: 3/28/2017 9:15:59			Type: QC				
Method: 60102007_041712(v608)		Mode: CONC		Corr. Factor: 1.000000					
User: admin		SSTRACE02:			Custom ID2:		Custom ID3:		
Comment:									
Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	500.2	.0004	-.0005	-.0001	480.4	-.0004	.0002	.0005
Stddev	.0005	8.0	.0002	.0002	.0001	8.6	.0000	.0001	.0002
%RSD	391.4	1.589	56.55	44.62	62.74	1.785	5.196	71.71	31.46
#1	.0007	494.1	.0002	-.0008	-.0002	477.3	-.0004	.0003	.0004
#2	-.0001	509.2	.0002	-.0004	-.0001	490.1	-.0004	.0002	.0005
#3	-.0002	497.3	.0006	-.0004	-.0001	473.8	-.0003	.0000	.0007
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									
Elem	Cu3247	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	181.6	.0691	494.8	.0002	-.0002	.1634	-.0002	.0000
Stddev	.0003	.5	.0449	1.3	.0000	.0006	.0067	.0001	.0033
%RSD	118.5	.2602	64.93	.2638	16.26	323.1	4.074	42.69	7424.
#1	-.0001	181.2	.0300	493.7	.0001	-.0001	.1583	-.0001	.0010
#2	-.0001	181.5	.0592	494.3	.0002	-.0008	.1608	-.0002	-.0036
#3	-.0005	182.2	.1181	496.2	.0002	.0004	.1709	-.0003	.0028
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
High Limit									
Low Limit									
Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0009	.0002	.0127	F.0026	-.0001	-.0006	.0008	-.0002	.0016
Stddev	.0013	.0030	.0009	.0005	.0009	.0001	.0018	.0002	.0000
%RSD	144.6	1511.	6.835	17.85	962.7	17.98	239.1	110.8	2.941
#1	-.0015	.0023	.0122	.0028	.0000	-.0005	.0009	-.0001	.0016
#2	-.0019	-.0033	.0122	.0030	-.0010	-.0007	.0025	-.0005	.0016
#3	.0006	.0016	.0137	.0021	.0008	-.0007	-.0011	.0000	.0017
Check ?	Chk Pass	Chk Pass	None	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				.0010					
Low Limit				-.0010					

Raw Data MA13933 page 13 of 198

Sample Name: ICSAB		Acquired: 3/28/2017 9:20:49				Type: QC				
Method: 60102007_041712(v608)		Mode: CONC		Corr. Factor: 1.000000						
User: admin		SSTRACE02:		Custom ID2:		Custom ID3:				
Comment:										
Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9312	499.4	1.075	.5019	.4849	474.4	.9416	.4720	.4957	.5171
Stddev	.0058	12.7	.001	.0016	.0009	1.4	.0020	.0015	.0004	.0012
%RSD	.6253	2.549	.1301	.3202	.1894	.2862	.2153	.3280	.0797	.2318
#1	.9367	512.5	1.076	.5004	.4839	475.8	.9437	.4729	.4953	.5179
#2	.9318	498.5	1.077	.5018	.4852	473.2	.9416	.4729	.4956	.5176
#3	.9251	487.1	1.074	.5036	.4857	474.2	.9396	.4702	.4961	.5157
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value										
Range										
Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	178.1	.0757	497.8	.4854	.9900	.1804	.9440	.9541	1.006	.9999
Stddev	.2	.0071	.3	.0015	.0015	.0141	.0018	.0011	.001	.0048
%RSD	.0849	9.396	.0611	.3047	.1506	7.795	.1873	.1140	.0676	.4823
#1	177.9	.0811	497.5	.4850	.9903	.1698	.9455	.9528	1.007	1.004
#2	178.1	.0677	498.1	.4842	.9912	.1751	.9446	.9550	1.006	1.001
#3	178.2	.0784	497.8	.4870	.9883	.1964	.9420	.9544	1.005	.9947
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value										
Range										
Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062			
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm			
Avg	.0753	.9383	1.010	.9859	.9508	.4748	.9380			
Stddev	.0010	.0023	.002	.0047	.0037	.0011	.0005			
%RSD	1.342	.2478	.2179	.4750	.3840	.2218	.0521			
#1	.0743	.9369	1.008	.9910	.9469	.4742	.9375			
#2	.0752	.9409	1.010	.9847	.9541	.4760	.9385			
#3	.0763	.9369	1.012	.9819	.9515	.4741	.9381			
Check ?	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass			
Value										
Range										

Raw Data MA13933 page 15 of 198

Sample Name: ICSA		Acquired: 3/28/2017 9:15:59		Type: QC	
Method: 60102007_041712(v608)		Mode: CONC		Corr. Factor: 1.000000	
User: admin		SSTRACE02:		Custom ID2:	
Comment:				Custom ID3:	
Int. Std.	In2306	Y_2243	Y_3600	Y_3710	
Units	Cts/S	Cts/S	Cts/S	Cts/S	
Avg	2099.2	5397.0	40369.	5758.0	
Stddev	3.6	5.6	84.	30.2	
%RSD	.16914	.10450	.20887	.52444	
#1	2103.3	5402.5	40315.	5789.4	
#2	2097.2	5391.2	40327.	5729.2	
#3	2097.1	5397.2	40466.	5755.5	

Raw Data MA13933 page 14 of 198

Sample Name: ICSAB		Acquired: 3/28/2017 9:20:49		Type: QC	
Method: 60102007_041712(v608)		Mode: CONC		Corr. Factor: 1.000000	
User: admin		SSTRACE02:		Custom ID2:	
Comment:				Custom ID3:	
Int. Std.	In2306	Y_2243	Y_3600	Y_3710	
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2060.3	5395.4	40261.	5733.5	
Stddev	1.8	8.5	139.	11.0	
%RSD	.08609	.15824	.34512	.19264	
#1	2059.2	5388.3	40266.	5725.0	
#2	2059.4	5393.0	40398.	5746.0	
#3	2062.4	5404.9	40120.	5729.5	

Raw Data MA13933 page 16 of 198

Sample Name: CCV Acquired: 3/28/2017 9:27:40 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2488	39.33	1.980	2.001	2.005	39.47	2.002	2.002	1.997	1.997
Stddev	.0005	.11	.004	.000	.004	.10	.005	.005	.002	.002
%RSD	.1825	.2847	.1914	.0099	.2183	.2427	.2363	.2633	.1213	.1223
#1	2485	39.20	1.980	2.001	2.001	39.36	1.999	1.999	2.003	1.997
#2	2486	39.35	1.977	2.001	2.009	39.54	2.002	1.999	2.001	1.995
#3	2493	39.42	1.984	2.002	2.005	39.51	2.009	2.008	2.006	1.999

Check ? Chk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk Pass  
Value  
Range

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	39.78	39.59	39.41	2.024	2.033	39.72	2.010	1.981	1.986	1.983
Stddev	.11	.14	.19	.001	.002	.04	.003	.003	.005	.004
%RSD	.2796	.3468	.4744	.0589	.1180	.1084	.1429	.1447	.2543	.1979
#1	39.67	39.47	39.20	2.024	2.033	39.67	2.009	1.984	1.984	1.982
#2	39.89	39.74	39.55	2.023	2.031	39.73	2.007	1.981	1.983	1.980
#3	39.79	39.57	39.48	2.025	2.035	39.75	2.013	1.979	1.992	1.988

Check ? Chk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk Pass  
Value  
Range

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.004	2.014	2.042	2.036	2.008	2.024	2.005
Stddev	.004	.006	.004	.002	.003	.002	.001
%RSD	.2010	.2935	.2086	.0849	.1348	.1047	.0488
#1	2.003	2.011	2.039	2.036	2.007	2.021	2.005
#2	2.000	2.010	2.047	2.035	2.005	2.024	2.004
#3	2.008	2.021	2.041	2.038	2.010	2.026	2.006

Check ? None Chk PassChk PassChk PassChk PassChk PassChk PassChk Pass  
Value  
Range

Raw Data MA13933 page 17 of 198

Sample Name: CCB Acquired: 3/28/2017 9:36:47 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	.0170	-.0003	.0005	.0006	.0137	.0003	.0004	.0005	.0012
Stddev	.0001	.0078	.0000	.0002	.0000	.0021	.0001	.0001	.0001	.0000
%RSD	46.06	45.91	10.74	47.16	3.675	15.29	40.98	34.17	10.58	4.112
#1	.0004	.0253	-.0003	.0003	.0006	.0125	.0005	.0006	.0006	.0012
#2	.0002	.0098	-.0003	.0007	.0006	.0124	.0003	.0003	.0005	.0011
#3	.0003	.0159	-.0003	.0004	.0006	.0161	.0002	.0003	.0004	.0012

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0087	.0165	.0048	.0006	-.0002	.0325	.0003	.0009	-.0002	.0004
Stddev	.0015	.0059	.0044	.0001	.0001	.0061	.0003	.0001	.0002	.0003
%RSD	17.55	35.66	91.72	10.39	67.82	18.82	111.1	7.484	106.0	86.10
#1	.0096	.0199	-.0003	.0006	-.0001	.0390	.0005	.0010	.0000	.0000
#2	.0070	.0097	.0075	.0007	-.0002	.0316	.0002	.0009	-.0002	.0006
#3	.0096	.0198	.0071	.0005	-.0003	.0269	.0000	.0009	-.0005	.0004

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012	.0003	.0007	.0003	-.0005	.0007	.0003
Stddev	.0004	.0001	.0001	.0001	.0013	.0000	.0001
%RSD	32.79	22.32	14.29	39.77	275.8	6.814	39.60
#1	.0008	.0003	.0007	.0004	.0010	.0008	.0005
#2	.0013	.0002	.0008	.0004	-.0009	.0007	.0003
#3	.0016	.0003	.0006	.0002	-.0014	.0007	.0002

Check ? None Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Raw Data MA13933 page 19 of 198

Sample Name: CCV Acquired: 3/28/2017 9:27:40 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2385.2	5911.4	44077.7	5885.6
Stddev	4.5	8.3	58.	67.2
%RSD	.18842	.14079	.13242	1.1423
#1	2384.7	5920.4	44116.	5959.8
#2	2381.0	5909.6	44010.	5828.8
#3	2390.0	5904.0	44106.	5868.2

Raw Data MA13933 page 18 of 198

Sample Name: CCB Acquired: 3/28/2017 9:36:47 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2757.8	5962.9	46850.	5981.9
Stddev	4.3	4.7	225.	71.0
%RSD	.15451	.07881	.47978	1.1876
#1	2753.0	5957.5	46869.	6050.9
#2	2761.2	5965.7	47065.	5985.8
#3	2759.2	5965.4	46616.	5909.0

Raw Data MA13933 page 20 of 198



Sample Name: DI CHECK Acquired: 3/28/2017 9:40:50 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	-.0016	-.0006	-.0003	-.0001	-.0037	.0000	-.0001	.0000	.0001
Stddev	.000	.0098	.0005	.0002	.0001	.0007	.0001	.0000	.000	.0001
%RSD	6875.	600.9	91.77	72.77	74.88	19.55	564.2	44.51	1402.	50.45
#1	.0003	.0060	-.0009	-.0005	-.0001	-.0037	.0001	.0000	.0001	.0002
#2	.0000	.0018	.0000	-.0002	-.0002	-.0029	-.0001	-.0001	.0001	.0001
#3	-.0003	-.0127	-.0009	-.0001	.0000	-.0043	.0000	-.0001	-.0002	.0002

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0092	.0094	.0250	.0000	-.0011	.0074	.0000	.0004	-.0010	.0013
Stddev	.0020	.0231	.0040	.0000	.0001	.0050	.0002	.0005	.0009	.0003
%RSD	21.93	245.4	16.16	84.54	8.086	68.23	1035.	134.1	89.83	25.65
#1	-.0087	.0193	.0296	.0000	-.0010	.0121	.0002	.0009	-.0020	.0014
#2	-.0115	-.0170	.0220	.0000	-.0011	.0079	.0000	.0002	-.0006	.0009
#3	-.0075	.0259	.0234	.0001	-.0012	.0021	-.0002	.0000	-.0004	.0016

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0015	-.0004	.0001	-.0004	.0009	.0000	-.0005
Stddev	.0006	.0001	.0001	.0001	.0004	.000	.0001
%RSD	42.02	31.93	79.61	13.14	44.61	746.2	20.25
#1	-.0020	-.0003	.0001	-.0005	.0012	.0001	-.0004
#2	-.0018	-.0006	.0000	-.0004	.0005	-.0001	-.0006
#3	-.0008	-.0005	.0001	-.0004	.0010	.0000	-.0006

Check ? None Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Raw Data MA13933 page 21 of 198

Sample Name: DI CHECK Acquired: 3/28/2017 9:40:50 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2854.4	6110.3	47758.	6237.2
Stddev	16.5	29.4	194.	57.6
%RSD	.57828	.48098	.40628	.92381
#1	2872.1	6144.1	47941.	6296.8
#2	2851.7	6096.6	47779.	6233.0
#3	2839.4	6090.4	47555.	6181.8

Raw Data MA13933 page 22 of 198

Sample Name: MP31862-MB1 Acquired: 3/28/2017 9:45:03 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	-.0013	-.0011	-.0003	-.0001	.0067	-.0001	-.0001	-.0001	.0003
Stddev	.000	.0082	.0004	.0002	.0001	.0020	.0000	.0000	.0002	.0003
%RSD	545.9	618.6	39.54	57.06	42.70	30.22	14.52	26.39	155.8	75.27
#1	-.0002	-.0094	-.0013	-.0004	-.0002	.0076	-.0001	-.0001	-.0003	.0001
#2	-.0002	.0071	-.0013	-.0001	-.0002	.0044	-.0001	-.0001	.0001	.0004
#3	.0002	-.0017	-.0006	-.0005	-.0001	.0081	-.0001	-.0001	-.0001	.0005

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0038	.0234	-.0002	.0000	-.0007	.0228	.0001	.0003	-.0003	.0012
Stddev	.0019	.0350	.0087	.000	.0000	.0122	.0002	.0001	.0005	.0010
%RSD	50.46	149.8	3579.	39.01	3.923	53.45	320.4	55.83	152.6	84.51
#1	-.0052	.0463	-.0100	.0000	-.0008	.0350	.0002	.0004	-.0004	.0004
#2	-.0047	-.0169	.0065	.0000	-.0007	.0106	-.0001	.0003	-.0008	.0023
#3	-.0016	.0408	.0028	.0000	-.0008	.0227	.0000	.0001	.0002	.0008

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0039	-.0002	.0000	-.0003	-.0015	-.0001	.0002
Stddev	.0001	.0002	.000	.0000	.0012	.0000	.0000
%RSD	2.043	87.54	60.63	3.773	82.87	79.43	9.359
#1	.0039	-.0004	.0000	-.0003	-.0028	-.0001	.0002
#2	.0040	-.0003	-.0001	-.0003	-.0011	-.0001	.0003
#3	.0039	.0000	-.0001	-.0003	-.0005	.0000	.0002

Check ? None Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Raw Data MA13933 page 23 of 198

Sample Name: MP31862-MB1 Acquired: 3/28/2017 9:45:03 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2757.0	6041.8	47356.	6003.6
Stddev	3.9	2.2	208.	37.1
%RSD	.14323	.03600	.44019	.61856
#1	2757.6	6043.7	47379.	6035.9
#2	2752.8	6042.3	47137.	6011.9
#3	2760.6	6039.5	47552.	5963.0

Raw Data MA13933 page 24 of 198

Sample Name: MP31862-B1 Acquired: 3/28/2017 9:49:17 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0454	27.23	1.973	2.028	.0503	25.57	.0502	.5003	.1975	.2472
Stddev	.0002	.10	.003	.010	.0003	.11	.0000	.0004	.0014	.0008
%RSD	.5045	.3740	.1422	.5035	.5526	.4105	.0528	.0895	.7026	.3242
#1	.0457	27.19	1.972	2.019	.0500	25.48	.0502	.4999	.1985	.2474
#2	.0454	27.35	1.976	2.039	.0504	25.69	.0502	.5008	.1981	.2464
#3	.0452	27.16	1.971	2.025	.0506	25.54	.0502	.5002	.1959	.2479

Check ? Chk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk Pass  
Value  
Range

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.84	25.15	24.66	.4941	.5632	25.47	.5011	.4701	.4959	1.953
Stddev	.09	.13	.09	.0008	.0007	.11	.0002	.0020	.0016	.004
%RSD	.3638	.5087	.3778	.1607	.1204	.4448	.0446	.4255	.3250	.1861
#1	25.73	25.01	24.55	.4947	.5628	25.39	.5009	.4720	.4966	1.956
#2	25.91	25.27	24.69	.4944	.5640	25.60	.5013	.4680	.4970	1.955
#3	25.87	25.15	24.73	.4932	.5629	25.42	.5010	.4704	.4941	1.949

Check ? Chk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk Pass  
Value  
Range

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0128	.5534	.5457	.5325	1.929	.4840	.4894
Stddev	.0033	.0005	.0020	.0013	.005	.0011	.0012
%RSD	25.71	.0934	.3666	.2389	.2473	.2221	.2393
#1	.0108	.5533	.5436	.5324	1.932	.4849	.4882
#2	.0111	.5530	.5476	.5338	1.932	.4842	.4895
#3	.0167	.5540	.5459	.5312	1.924	.4828	.4905

Check ? None Chk Pass None None Chk PassChk PassChk Pass  
Value  
Range

Raw Data MA13933 page 25 of 198

Sample Name: MP31862-B1 Acquired: 3/28/2017 9:49:17 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2511.2	5967.9	45559.	5910.2
Stddev	5.6	3.8	212.	23.3
%RSD	.22208	.06367	.46604	.39426
#1	2505.1	5972.3	45481.	5923.0
#2	2516.1	5966.1	45396.	5883.3
#3	2512.3	5965.4	45799.	5924.2

Raw Data MA13933 page 26 of 198

Sample Name: FA42136-1 Acquired: 3/28/2017 9:53:14 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	-.0001	.0065	-.0001	.0744	-.0001	122.8	-.0002	-.0001	.0003	.0008
Stddev	.0003	.0046	.0005	.0002	.0000	.2	.0000	.0001	.0003	.0001
%RSD	443.0	70.87	346.2	.2730	38.53	.1835	14.53	97.20	92.99	11.25
#1	.0000	.0031	.0002	.0742	-.0001	122.9	-.0002	.0000	.0004	.0009
#2	-.0004	.0046	-.0007	.0746	-.0001	122.5	-.0002	-.0002	.0004	.0007
#3	.0002	.0118	.0001	.0745	-.0001	122.9	-.0002	.0000	.0000	.0008

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	.0034	2.318	.4959	.0002	.0009	7.594	.0000	.0032	-.0012	.0057
Stddev	.0019	.030	.21	.0000	.0002	.019	.000	.0007	.0001	.0015
%RSD	57.37	1.298	.4299	14.43	24.94	.2501	.484.9	22.13	10.74	25.92
#1	.0047	2.283	49.70	.0002	.0012	7.612	.0002	.0025	-.0013	.0042
#2	.0043	2.330	49.34	.0002	.0009	7.574	-.0002	.0039	-.0011	.0056
#3	.0012	2.339	49.72	.0002	.0007	7.596	-.0001	.0032	-.0011	.0071

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	7.371	-.0002	.4308	.0015	-.0006	.0014	.0003
Stddev	.004	.0001	.0005	.0000	.0011	.0001	.0000
%RSD	.0590	24.02	.1123	2.400	181.1	9.030	4.273
#1	7.374	-.0003	.4305	.0015	-.0004	.0012	.0003
#2	7.366	-.0002	.4314	.0014	-.0004	.0015	.0003
#3	7.374	-.0003	.4306	.0015	-.0017	.0013	.0003

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2466.2	5722.8	43978.	5761.6
Stddev	5.1	3.6	158.	46.2
%RSD	.20748	.06285	.35865	.80111
#1	2466.9	5720.6	44018.	5716.6
#2	2470.9	5727.0	44112.	5808.8
#3	2460.8	5720.9	43804.	5759.3

Raw Data MA13933 page 27 of 198

Sample Name: MP31862-D1 Acquired: 3/28/2017 9:57:23 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	-.0001	.0058	-.0003	.0736	-.0001	121.5	-.0001	-.0003	.0001	.0008
Stddev	.0001	.0050	.0004	.0002	.0000	.2	.0000	.0001	.0002	.0002
%RSD	72.44	86.81	120.1	.2600	50.48	.2016	.2787	44.74	115.1	23.34
#1	-.0002	.0057	-.0005	.0736	-.0001	121.5	-.0001	-.0004	.0003	.0007
#2	-.0002	.0109	-.0006	.0734	-.0001	121.3	-.0002	-.0003	.0000	.0008
#3	.0000	.0008	.0001	.0738	.0000	121.8	-.0002	-.0002	.0002	.0010

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	-.0008	2.290	49.05	.0001	.0006	7.539	-.0002	.0032	-.0002	.0036
Stddev	.0008	.031	.07	.0000	.0002	.009	.0000	.0005	.0001	.0013
%RSD	107.0	1.352	.1356	19.19	28.87	.1172	5.980	14.41	78.32	34.66
#1	.0000	2.312	48.98	.0001	.0005	7.541	-.0002	.0038	.0000	.0049
#2	-.0016	2.255	49.11	.0002	.0005	7.529	-.0002	.0030	-.0002	.0024
#3	-.0007	2.304	49.07	.0001	.0008	7.546	-.0002	.0030	-.0003	.0035

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	7.339	-.0002	.4282	.0013	-.0005	.0015	.0002
Stddev	.007	.0001	.0016	.0000	.0011	.0001	.0000
%RSD	.0974	49.99	.3679	2.329	214.1	9.361	19.37
#1	7.331	-.0002	.4281	.0012	-.0004	.0013	.0002
#2	7.340	-.0003	.4267	.0013	-.0017	.0016	.0002
#3	7.346	-.0001	.4298	.0013	.0005	.0015	.0001

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2489.7	5789.1	44128.	5905.6
Stddev	9.7	16.7	170.	31.6
%RSD	.38906	.28923	.38491	.53485
#1	2489.1	5801.3	43951.	5922.4
#2	2499.7	5795.9	44144.	5869.2
#3	2480.3	5770.0	44289.	5925.3

Raw Data MA13933 page 28 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: MP31862-SD1											
Acquired: 3/28/2017 10:01:35 Type: Unk											
Method: 60102007_041712(v608) Mode: CONC Corr. Factor: 5.000000											
User: admin SSTRACE02: Custom ID2: Custom ID3:											
Comment:											
Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247	
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)	(Y_3600)	
Avg	-0002	-0105	-0039	-0713	-0005	-120.7	-0003	-0003	-0005	-0015	
Stddev	.0016	.0472	.0017	.0001	.0005	.1	.0000	.0003	.0014	.0003	
%RSD	817.5	447.3	44.86	.1736	88.58	.1005	12.03	84.55	270.0	22.74	
#1	-0013	-0304	-0026	-0712	-0003	120.7	-0004	-0006	-0004	-0012	
#2	-0001	.0621	-0059	.0714	-0010	120.8	-0003	-0003	-0022	-0015	
#3	-0019	-0000	-0032	-0712	-0002	120.6	-0004	-0001	-0002	-0018	
Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960	
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	
Avg	-0408	2.292	48.88	.0000	-0045	7.419	-0008	.0046	-0058	.0084	
Stddev	.0068	.126	.05	.0002	.0009	.011	.0009	.0024	.0030	.0063	
%RSD	16.65	5.502	.1078	.448.7	19.44	.1470	110.2	52.13	50.68	74.31	
#1	-0458	2.157	48.89	.0003	-0038	7.413	.0002	.0043	-0076	.0039	
#2	-0331	2.311	48.92	-0001	-0055	7.432	-0012	.0023	-0024	.0058	
#3	-0437	2.407	48.82	.0000	-0044	7.413	-0013	.0070	-0074	.0156	
Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062				
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)				
Avg	7.109	-0006	.4161	.0040	.0005	.0013	.0003				
Stddev	.023	.0004	.0011	.0002	.0025	.0001	.0002				
%RSD	.3222	61.19	.2549	5.141	456.3	11.28	78.72				
#1	7.089	-0008	.4173	.0040	-0021	.0014	.0001				
#2	7.104	-0009	.4151	.0038	.0010	.0012	.0003				
#3	7.134	-0002	.4160	.0042	.0027	.0012	.0005				
Int. Std.	In2306	Y_2243	Y_3600	Y_3710							
Avg	2680.8	6034.5	46177.	5999.1							
Stddev	6.6	17.7	201.	32.9							
%RSD	.24518	.29298	.43607	.54896							
#1	2673.5	6042.8	45990.	6031.5							
#2	2686.3	6046.5	46390.	5965.7							
#3	2682.7	6014.2	46152.	6000.3							

Raw Data MA13933 page 29 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: MP31862-PS1											
Acquired: 3/28/2017 10:05:46 Type: Unk											
Method: 60102007_041712(v608) Mode: CONC Corr. Factor: 1.000000											
User: admin SSTRACE02: Custom ID2: Custom ID3:											
Comment:											
Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247	
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)	(Y_3600)	
Avg	.0450	2.665	.1085	.3423	.0517	123.2	.0529	.0528	.0523	.1058	
Stddev	.0004	.010	.0009	.0012	.0001	.2	.0001	.0001	.0003	.0004	
%RSD	.8056	.3894	.8354	.3518	.1057	.1692	.1639	.2295	.5364	.4238	
#1	.0452	2.653	.1076	.3418	.0517	123.1	.0530	.0528	.0527	.1062	
#2	.0446	2.669	.1094	.3413	.0517	123.0	.0529	.0529	.0522	.1053	
#3	.0451	2.672	.1086	.3436	.0518	123.4	.0528	.0527	.0522	.1059	
Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960	
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	
Avg	3.081	12.66	52.38	.0522	.1127	17.89	.1031	.0511	.1102	.1076	
Stddev	.004	.07	.16	.0001	.0001	.02	.0003	.0006	.0005	.0008	
%RSD	.1198	.5705	.3024	.2157	.1172	.1296	.3293	1.176	.4836	.7737	
#1	3.077	12.60	52.22	.0523	.1129	17.91	.1035	.0506	.1099	.1080	
#2	3.081	12.65	52.39	.0521	.1126	17.86	.1028	.0509	.1099	.1080	
#3	3.085	12.74	52.53	.0521	.1126	17.89	.1030	.0517	.1108	.1066	
Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062				
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)				
Avg	7.112	.0518	.4609	.1062	.0972	.0528	.2586				
Stddev	.012	.0004	.0012	.0006	.0005	.0003	.0004				
%RSD	.1698	.7898	.2525	.5829	.5564	.5949	.1619				
#1	7.126	.0523	.4607	.1065	.0978	.0529	.2591				
#2	7.103	.0516	.4598	.1055	.0971	.0524	.2583				
#3	7.109	.0516	.4621	.1066	.0968	.0530	.2585				
Int. Std.	In2306	Y_2243	Y_3600	Y_3710							
Avg	2460.1	5789.9	44794.	5897.5							
Stddev	2.0	12.5	111.	44.2							
%RSD	.07965	.21550	.24717	.74879							
#1	2458.3	5777.9	44779.	5941.7							
#2	2462.2	5802.8	44911.	5897.5							
#3	2459.7	5788.9	44691.	5853.4							

Raw Data MA13933 page 30 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: MP31862-S1											
Acquired: 3/28/2017 10:09:47 Type: Unk											
Method: 60102007_041712(v608) Mode: CONC Corr. Factor: 1.000000											
User: admin SSTRACE02: Custom ID2: Custom ID3:											
Comment:											
Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247	
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)	(Y_3600)	
Avg	.0481	28.57	2.105	2.211	.0527	150.6	.0521	.5172	.2058	.2603	
Stddev	.0008	.09	.001	.010	.0002	.4	.0000	.0005	.0006	.0010	
%RSD	1.631	.3221	.0307	.4471	.3735	.2484	.0905	.0984	.3084	.4018	
#1	.0473	28.47	2.105	2.200	.0525	150.2	.0521	.5167	.2051	.2592	
#2	.0487	28.61	2.106	2.220	.0529	150.9	.0521	.5170	.2059	.2603	
#3	.0484	28.64	2.105	2.212	.0526	150.6	.0520	.5177	.2064	.2613	
Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960	
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	
Avg	26.53	28.85	75.25	.5143	.5774	34.44	.5119	.4936	.5271	2.070	
Stddev	.05	.06	.08	.0008	.0004	.06	.0007	.0012	.0019	.002	
%RSD	.2026	.2244	.1015	.1579	.0746	.1769	.1307	.2361	.3588	.1071	
#1	26.52	28.79	75.21	.5135	.5777	34.38	.5127	.4949	.5251	2.072	
#2	26.59	28.82	75.21	.5143	.5776	34.50	.5115	.4933	.5274	2.070	
#3	26.49	28.85	75.34	.5151	.5769	34.43	.5115	.4926	.5289	2.068	
Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062				
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)				
Avg	7.472	.5633	.9946	.5512	2.005	.5105	.4984				
Stddev	.006	.0004	.0036	.0012	.007	.0017	.0008				
%RSD	.0826	.0631	.3592	.2260	.3617	.3377	.1515				
#1	7.468	.5629	.9911	.5498	2.012	.5090	.4992				
#2	7.479	.5633	.9983	.5517	2.004	.5102	.4977				
#3	7.469	.5636	.9944	.5522	1.998	.5124	.4984				
Int. Std.	In2306	Y_2243	Y_3600	Y_3710							
Avg	2337.6	5733.8	43770.	5823.9							
Stddev	4.0	6.7	167.	29.1							
%RSD	.17291	.11614	.38248	.50007							
#1	2333.4	5734.4	43917.	5795.1							
#2	2338.0	5726.8	43805.	5853.3							
#3	2341.5	5740.1	43588.	5823.2							

Raw Data MA13933 page 31 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: MP31862-S2											
Acquired: 3/28/2017 10:13:43 Type: Unk											
Method: 60102007_041712(v608) Mode: CONC Corr. Factor: 1.000000											
User: admin SSTRACE02: Custom ID2: Custom ID3:											
Comment:											
Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247	
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)	(Y_3600)	

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Sample Name: FA42249-2 Acquired: 3/28/2017 10:17:40 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 5.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)	
Avg	-0.020	3.102	-0.036	-0.095	-0.003	15.80	-0.003	-0.003	-0.052	-0.017
Stddev	.0002	.026	.0016	.0004	.0004	.08	.0002	.0006	.0010	.0004
%RSD	11.94	.8373	45.06	.4086	136.9	.4813	84.39	191.1	18.88	21.13

#1	-0.019	3.090	-0.050	-0.109	-0.006	15.82	-0.003	-0.002	-0.050	-0.015
#2	-0.019	3.132	-0.019	-0.1095	-0.005	15.87	-0.001	-0.010	-0.062	-0.021
#3	-0.023	3.084	-0.037	-0.1099	-0.002	15.72	-0.005	-0.002	-0.043	-0.016

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	4.919	2.799	3.352	-0.177	-0.029	207.5	-0.003	-0.042	-0.053	-0.029
Stddev	.020	.084	.044	.0001	.0008	.7	.0004	.0018	.0041	.0079
%RSD	.3991	2.998	1.304	.5857	29.09	.3406	161.8	42.24	77.77	272.8

#1	4.897	2.872	3.305	-0.177	-0.019	208.2	-0.002	-0.059	-0.008	-0.057
#2	4.936	2.818	3.391	-0.177	-0.035	207.6	-0.007	-0.024	-0.062	-0.100
#3	4.923	2.707	3.360	-0.179	-0.032	206.8	-0.002	-0.041	-0.088	-0.043

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	5.727	-0.016	-0.119	-0.181	-0.043	-0.046	-0.018
Stddev	.018	.0006	.0009	.0010	.0029	.0004	.0004
%RSD	.3234	40.10	.7712	5.767	66.68	7.943	19.51

#1	5.706	-0.009	-0.1195	-0.174	-0.069	-0.049	-0.015
#2	5.735	-0.021	-0.1192	-0.193	-0.012	-0.042	-0.017
#3	5.740	-0.017	-0.1209	-0.176	-0.048	-0.048	-0.022

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2630.1	6072.9	46018.	5929.0
Stddev	4.8	11.7	184.	32.6
%RSD	.18105	.19297	.39914	.54955

#1	2630.8	6082.3	46230.	5892.9
#2	2634.5	6076.7	45921.	5937.8
#3	2625.1	6059.8	45904.	5956.2

Raw Data MA13933 page 33 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: CCV Acquired: 3/28/2017 10:21:52 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2355.2	5808.1	43671.	5827.5
Stddev	10.5	18.5	76.	35.5
%RSD	.44484	.31917	.17363	.60883

#1	2365.3	5814.3	43683.	5845.4
#2	2355.8	5822.8	43740.	5850.5
#3	2344.4	5787.3	43590.	5786.6

Raw Data MA13933 page 35 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: CCV Acquired: 3/28/2017 10:21:52 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2498	40.03	2.018	2.047	2.022	40.11	2.049	2.047	2.032	2.011
Stddev	.0002	.04	.003	.006	.005	.08	.004	.003	.003	.005
%RSD	.0783	.0923	.1422	.2810	.2570	.2110	.2197	.1533	.1359	.2484

#1	.2497	40.07	2.017	2.052	2.023	40.11	2.046	2.045	2.032	2.010
#2	.2496	40.00	2.016	2.041	2.017	40.02	2.046	2.045	2.029	2.006
#3	.2500	40.02	2.022	2.048	2.027	40.19	2.054	2.050	2.035	2.016

Check ? Chk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk Pass  
Value  
Range

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	39.92	40.29	39.72	2.053	2.066	40.38	2.046	2.008	2.025	2.017
Stddev	.13	.14	.12	.004	.005	.09	.004	.006	.006	.003
%RSD	.3248	.3570	.3096	.1734	.2418	.2250	.2137	.3002	.2928	.1669

#1	39.88	40.42	39.75	2.051	2.063	40.46	2.045	2.001	2.020	2.017
#2	39.82	40.13	39.59	2.051	2.063	40.28	2.042	2.009	2.025	2.014
#3	40.07	40.31	39.83	2.057	2.072	40.41	2.051	2.013	2.032	2.020

Check ? Chk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk Pass  
Value  
Range

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.042	2.055	2.061	2.036	2.030	2.050	2.042
Stddev	.002	.004	.005	.004	.007	.003	.005
%RSD	.1022	.2102	.2430	.2161	.3413	.1480	.2460

#1	2.043	2.054	2.066	2.037	2.033	2.050	2.040
#2	2.039	2.052	2.056	2.031	2.022	2.047	2.038
#3	2.043	2.060	2.062	2.039	2.034	2.053	2.048

Check ? None Chk PassChk PassChk PassChk PassChk PassChk PassChk Pass  
Value  
Range

Raw Data MA13933 page 34 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: CCB Acquired: 3/28/2017 10:25:47 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.0002	.0122	-0.0002	.0005	.0006	.0115	.0003	.0003	.0006
Stddev	.0002	.0041	.0005	.0001	.0000	.0008	.0001	.0000	.0001
%RSD	67.94	33.46	240.9	27.95	5.445	6.969	26.74	6.280	22.65

#1	-0.0003	.0168	.0004	.0006	.0006	.0111	.0003	.0003	.0008
#2	-0.0003	.0109	-0.0004	.0006	.0006	.0109	.0002	.0003	.0005
#3	.0000	.0089	-0.0007	.0004	.0006	.0124	.0002	.0003	.0006

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Elem	Cu3247	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	.0168	.0420	.0221	.0006	F.0010	.0444	.0003	.0002
Stddev	.0001	.0057	.0129	.0078	.0000	.0005	.0086	.0001	.0002
%RSD	13.17	34.12	30.63	35.43	7.524	48.31	19.38	17.59	107.7

#1	.0007	.0135	.0565	.0217	.0006	.0015	.0537	.0004	.0001
#2	.0008	.0234	.0322	.0144	.0006	.0010	.0426	.0003	.0000
#3	.0006	.0135	.0371	.0301	.0005	.0005	.0368	.0003	.0004

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Fail Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0014	.0012	.0002	.0007	.0005	.0006	.0005	.0002
Stddev	.000	.0014	.0002	.0001	.0001	.0002	.0004	.0001	.0001
%RSD	1260.	102.9	21.07	56.78	9.199	38.85	63.62	31.13	78.20

#1	.0004	.0024	.0014	.0003	.0007	.0007	.0011	.0006	.0003
#2	-0.0002	-0.0002	.0011	.0001	.0008	.0005	.0004	.0005	.0001
#3	-0.0003	.0019	.0009	.0003	.0007	.0003	.0005	.0003	.0001

Check ? Chk Pass Chk Pass None Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Raw Data MA13933 page 36 of 198

Sample Name: CCB	Acquired: 3/28/2017 10:25:47	Type: QC
Method: 60102007_041712(v608)	Mode: CONC	Corr. Factor: 1.000000
User: admin	SSTRACE02:	Custom ID2:
Comment:		Custom ID3:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2800.3	6191.6	46972.	5962.5
Stddev	7.8	9.9	216.	26.1
%RSD	.27921	.15951	.45956	.43777
#1	2805.4	6198.3	47009.	5954.8
#2	2791.3	6196.3	47167.	5941.0
#3	2804.3	6180.3	46740.	5991.5

#1	2805.4	6198.3	47009.	5954.8
#2	2791.3	6196.3	47167.	5941.0
#3	2804.3	6180.3	46740.	5991.5

Raw Data MA13933 page 37 of 198

Sample Name: FA42249-3      Acquired: 3/28/2017 10:30:01      Type: Unk  
Method: 60102007\_041712(v608)      Mode: CONC      Corr. Factor: 4.000000  
User: admin      SSTRACE02:      Custom ID2:      Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2423)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2423)	(Y_2423)	(Y_3600)	(Y_3600)
Avg	<b>-0.0013</b>	<b>-2.458</b>	<b>-0.0014</b>	<b>-1.046</b>	<b>-0.0002</b>	<b>9.013</b>	<b>-0.0002</b>	<b>-0.0000</b>	<b>-0.0011</b>	<b>-0.0012</b>
StdDev	.0029	.0168	.0024	.0006	.0003	.029	.0001	.000	.0008	.0007
%RSD	217.7	6.823	173.3	.5538	130.7	.3179	27.95	3754.	69.29	59.12

#1	-.0044	.2627	-.0029	.1047	-.0006	8.983	-.0002	.0002	.0020	.0004
#2	.0015	.2292	-.0028	.1052	.0000	9.016	-.0001	-.0003	.0005	.0018
#3	-.0011	.2456	.0014	.1040	-.0001	9.040	-.0002	.0000	.0008	.0015

Elm	Fe2599	K 7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y 3710)	(Y 3710)	(Y 3710)	(Y 3600)	(Y 2243)	(Y 3710)	(Y 2243)	(In2306)	(Y 2443)	(Y 2243)
Avg	3.545	1.803	5.722	.0081	-.0026	127.2	-.0005	.0013	-.0012	.0045
Stddev	.022	.053	.079	.0002	.0002	.1	.0003	.0012	.0027	.0039
%RSD	.6125	2.938	1.386	2.377	8.696	.0591	65.38	93.22	233.3	85.97

#1	3.540	1.744	5.655	.0083	-.0026	127.1	-.0009	.0026	.0014	.0044
#2	3.569	1.817	5.810	.0080	-.0028	127.2	-.0004	.0007	-.0039	.0007
#3	3.526	1.847	5.702	.0080	-.0024	127.2	-.0002	.0005	-.0009	.0084

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	4.653	-0.009	0.0789	0.0018	-0.0017	0.0017	0.0022
Stddev	.009	.0003	.0004	.0006	.0018	.0004	.0002
%RSD	.1903	34.22	.5519	34.56	105.3	22.39	10.36

#1	4.658	-.0009	.0765	.0023	-.0038	.0013	.0024
#2	4.659	-.0006	.0773	.0011	-.0007	.0020	.0023
#3	4.643	-.0012	.0771	.0020	-.0007	.0019	.0020

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2617.7	6004.9	45325.	5879.2
Stddev	4.6	3.6	69.	20.7
%RSD	.17463	.05998	.15227	.35223

#1	2614.4	6001.5	45251.	5887.7
#2	2622.9	6008.7	45338.	5894.2
#3	2615.7	6004.6	45387.	5855.5

Raw Data MA13933 page 38 of 198

Sample Name: FA42249-5      Acquired: 3/28/2017 10:34:14      Type: Unk  
Method: 60102007\_041712(v608)      Mode: CONC      Corr. Factor: 4.000000  
User: admin      SSTRACE02:      Custom ID2:      Custom ID3:  
Comment:

	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Co2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2423)	(Y_3710)	(Y_3710)	(Y_2417)	(Y_2423)	(Y_2423)	(Y_3600)	(Y_3600)
Avg	<b>-0.012</b>	<b>-0.056</b>	<b>-0.006</b>	<b>-0.193</b>	<b>-0.005</b>	<b>26.17</b>	<b>-0.003</b>	<b>0.001</b>	<b>-0.004</b>	<b>-0.019</b>
StdDev	0.019	0.120	0.014	0.005	0.003	0.3	0.001	0.002	0.009	0.004
%GRSD	161.8	20.15	231.4	2797	57.2	0.1159	32.25	251.4	224.0	24.16

#1	-.0028	.0565	.0006	.1927	-.0007	26.14	-.0003	.0000	.0000	.0023
#2	.0009	.0729	-.0003	.1938	-.0003	26.17	-.0002	.0000	-.0002	.0015
#3	-.0016	.0495	-.0022	.1934	-.0003	26.20	-.0002	.0003	.0015	.0018

IS Ref	Fe2599	K 7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3610)	(Y_3620)	(Y_2443)	(Y_3710)	(Y_2443)	(In2306)	(Y_2443)	(Y_2443)
Avg	2.542	3.146	1.784	-0.222	-0.042	125.0	-0.003	0.039	-0.027	0.040
StdDev	.022	.057	.04	.0001	.0003	.1	.002	.0038	.0015	.0016
%RSD	.8703	1.803	.3973	.3641	6.153	.1072	60.94	96.82	55.63	40.86

#1	2.566	3.120	10.60	.0223	-.0045	124.8	-.0001	.0045	-.0022	.0049
#2	2.523	3.107	10.69	.0223	-.0040	125.1	-.0004	-.0001	-.0015	.0050
#3	2.537	3.211	10.64	.0221	-.0041	125.0	-.0005	.0074	-.0044	.0021

IS elem	Si2124	Sn1899	Sr4077	Ti3349	Ti11908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	5.699	-0.008	-1.841	-0.012	-0.007	-0.010	-0.157
Stddev	.009	.0008	.0004	.0003	.0026	.0002	.0003
%RSD	.1560	91.86	2252	25.75	363.9	24.44	1.701

#1	5.693	-.0003	.1844	.0013	.0012	.0007	.0157
#2	5.709	-.0005	.1843	.0015	.0031	.0010	.0154
#3	5.695	-.0017	.1836	.0009	-.0021	.0012	.0159

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2621.4	6011.9	45499.	5907.4
Stddev	8.0	12.4	107.	41.4
%RSD	.30447	.20678	.23503	.70127

#1	2612.2	5997.6	45617.	5874.4
#2	2625.1	6017.7	45472.	5953.9
#3	2626.8	6020.4	45408.	5894.0

Raw Data MA13933 page 39 of 198

Sample Name: FA42249-8	Acquired: 3/28/2017 10:38:25	Type: Unk
Method: 60102007_041712(v608)	Mode: CONC	Corr. Factor: 4.000000
User: admin	SSTRACE02:	Custom ID2: Custom ID3:
Comment:		

IS Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	.0009	1.371	-.0051	1.306	-.0001	37.05	-.0002	.0010	-.0008	-.0017
StdDev	.0007	.018	.0004	.0014	.0002	.07	.0000	.0003	.0007	.0014
%RSD	77.34	1.290	6.890	1.065	290.1	.1921	13.19	31.70	79.92	84.60

#1	.0014	1.354	-.0050	.1290	-.0001	37.12	-.0002	.0014	.0013	.0014
#2	.0012	1.370	-.0055	.1312	.0002	36.98	-.0003	.0009	.0011	.0004
#3	.0001	1.389	-.0048	.1316	.0001	37.06	-.0002	.0008	.0001	.0032

IS Ref	Fe2599 (Y_3710)	K_7664 (Y_3710)	Mg2790 (Y_3710)	Mn2576 (Y_3600)	Mo2020 (Y_2243)	Na5895 (Y_3710)	Ni2316 (Y_2243)	Pb2203 (h2306)	Sb2068 (Y_2243)	Se1960 (Y_2243)
Avg	7.218	.3925	12.50	.0275	-.0046	184.5	.0016	.0050	-.0025	.0023
Stddev	.031	.1011	.05	.0001	.0001	.3	.0002	.0032	.0008	.0027
%RSD	.4341	25.76	.3976	2.137	3.026	.1618	10.20	63.54	31.81	114.7

#1	7.189	.4659	12.46	.0275	-.0044	184.3	.0014	.0047	-.0019	.0005
#2	7.214	.4343	12.49	.0275	-.0046	184.3	.0017	.0020	-.0022	.0054
#3	7.251	.2771	12.56	.0276	-.0047	184.8	.0015	.0083	-.0034	.0011

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	12.36	-0.009	.1756	.0017	-.0028	.0010	.0444
Stddev	.02	.0001	.0004	.0005	.0017	.0001	.0002
%RSD	.1758	12.07	.1997	29.24	60.87	13.39	.4248

#1	12.34	-0.0009	.1752	.0022	-0.0010	.0010	.0447
#2	12.36	-0.0008	.1759	.0012	-0.0044	.0012	.0443
#3	12.38	-0.0010	.1757	.0016	-0.0030	.0009	.0444

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2580.2	5948.7	45317.	5907.5
Stddev	4.3	11.8	229.	37.2
%RSD	.16492	.19809	.50595	.62888

#1	2579.4	5943.1	45055.	5893.5
#2	2584.8	5962.3	45417.	5949.6
#3	2576.4	5940.8	45480.	5879.3

Raw Data MA13933 page 40 of 198

[Zoom In](#)  
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Sample Name: FA42249-9 Acquired: 3/28/2017 10:42:34 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 4.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	-0.002	.6400	-.0058	-.0554	-.0004	37.23	-.0004	-.0001	-.0021	-.0028
Stddev	.0007	.0144	.0032	.0005	.0002	.04	.0002	.0005	.0004	.0008
%RSD	445.9	2.247	55.37	.9640	57.10	.0942	52.21	413.7	18.15	27.55

#1	.0006	.6546	-.0095	-.0558	-.0003	37.27	-.0002	-.0001	.0017	.0034
#2	-.0002	.6258	.0042	-.0556	-.0002	37.20	-.0005	-.0006	.0021	.0032
#3	-.0009	.6398	.0037	-.0548	-.0006	37.21	-.0006	.0004	.0025	.0019

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	21.30	.8448	6.076	.0159	-.0047	163.5	-.0001	.0024	-.0051	.0048
Stddev	.09	.0759	.048	.0001	.0004	.3	.0005	.0004	.0046	.0004
%RSD	.4326	8.984	.7949	.6970	8.519	.1923	749.6	15.80	90.74	8.840

#1	21.19	.8624	6.123	.0160	-.0051	163.8	-.0001	.0020	-.0101	.0052
#2	21.36	.9104	6.078	.0159	-.0043	163.6	-.0007	.0025	-.0038	.0044
#3	21.34	.7617	6.027	.0158	-.0048	163.2	-.0004	.0028	-.0013	.0050

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	15.63	-.0004	-.1256	-.0038	-.0015	-.0092	.0442
Stddev	.01	.0010	.0004	.0007	.0058	.0008	.0001
%RSD	.0395	262.3	.3566	17.62	378.7	9.164	.2080

#1	15.64	-.0008	.1261	.0038	-.0044	.0084	.0442
#2	15.62	-.0010	.1255	.0044	-.0073	.0100	.0443
#3	15.63	.0007	.1252	.0031	-.0017	.0092	.0442

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2573.7	5909.9	45164.	5866.7
Stddev	2.4	5.0	74.	66.4
%RSD	.09344	.08492	.16392	1.1233

#1	2576.3	5915.3	45250.	5924.9
#2	2571.6	5905.4	45127.	5794.3
#3	2573.3	5908.9	45117.	5880.9

Raw Data MA13933 page 41 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: FA42390-5 Acquired: 3/28/2017 10:50:53 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 4.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	.0002	47.89	.0121	.0403	-.0001	.5942	-.0007	-.0031	.0788	.9653
Stddev	.0006	.05	.0029	.0004	.0002	.0043	.0001	.0001	.0006	.0055
%RSD	248.2	.1106	24.16	.8704	186.1	.7280	11.63	3.189	.7952	.5743

#1	-.0002	47.94	.0090	.0400	.0000	.5980	-.0006	-.0031	.0783	.9600
#2	.0001	47.91	.0148	.0402	-.0003	.5950	-.0008	-.0030	.0785	.9711
#3	.0008	47.83	.0126	.0407	.0000	.5895	-.0007	-.0031	.0795	.9649

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	91.65	1.467	.7444	.0206	.0053	.2140	.0072	8.411	.0707	.0102
Stddev	.12	.037	.0428	.0004	.0003	.0115	.0006	.007	.0023	.0019
%RSD	.1323	2.547	5.753	.2055	4.826	5.361	7.708	.0847	3.264	18.66

#1	91.62	1.448	.7620	.0209	.0056	.2147	.0070	8.411	.0704	.0112
#2	91.79	1.444	.6956	.0201	.0051	.2022	.0068	8.418	.0686	.0113
#3	91.55	1.510	.7756	.0207	.0051	.2252	.0078	8.404	.0731	.0080

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	3.206	.0206	.0117	2.131	-.0001	.1033	.0426
Stddev	.019	.0009	.0002	.039	.0011	.0001	.0003
%RSD	.5907	4.140	2.052	1.822	1685.	.1226	.6910

#1	3.216	.0199	.0120	2.107	-.0005	.1035	.0423
#2	3.217	.0203	.0115	2.176	.0012	.1032	.0426
#3	3.184	.0215	.0116	2.110	-.0008	.1033	.0429

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2686.4	6104.7	46623.	6043.1
Stddev	3.0	20.6	223.	51.7
%RSD	.11111	.33684	.47907	.85607

#1	2686.6	6125.2	46694.	6099.4
#2	2683.3	6104.8	46802.	6032.4
#3	2689.3	6084.1	46372.	5997.6

Raw Data MA13933 page 43 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: FA42054-5 Acquired: 3/28/2017 10:46:44 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 4.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	-.0011	.0807	-.0276	-.0717	-.0005	406.0	-.0005	-.0016	.0060	.0025
Stddev	.0008	.0297	.0009	.0002	.0002	.4	.0002	.0003	.0008	.0003
%RSD	69.81	36.82	3.318	.2904	31.11	.0891	32.33	20.33	13.01	10.23

#1	-.0011	.1141	.0276	.0715	-.0006	405.6	-.0005	-.0015	.0064	.0025
#2	-.0019	.0705	.0267	.0717	-.0006	406.2	-.0007	-.0019	.0051	.0027
#3	-.0004	.0574	.0286	.0719	-.0003	406.3	-.0004	-.0013	.0064	.0022

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_2243)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	65.79	2.940	15.61	.0606	.0193	188.9	-.0006	.0050	-.0041	.0069
Stddev	.17	.103	.13	.0003	.0001	.3	.0006	.0021	.0030	.0027
%RSD	.2522	3.509	.8201	.5228	.7543	.1413	96.57	42.00	73.33	39.17

#1	65.96	3.000	15.69	.0610	.0194	188.6	-.0006	.0028	-.0039	.0093
#2	65.63	3.000	15.47	.0605	.0191	189.0	.0000	.0069	-.0072	.0075
#3	65.77	2.821	15.69	.0604	.0194	189.0	-.0012	.0052	-.0012	.0040

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	8.346	-.0012	1.015	-.0068	.0019	.0033	-.0008
Stddev	.012	.0005	.004	.0004	.0008	.0010	.0002
%RSD	.1376	39.16	.3559	5.349	43.14	30.56	19.42

#1	8.333	-.0015	1.016	.0069	.0027	.0037	-.0006
#2	8.348	-.0007	1.012	.0064	.0019	.0022	-.0009
#3	8.356	-.0016	1.019	.0072	.0011	.0041	-.0009

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2530.0	5929.1	45011.	5991.8
Stddev	3.5	11.5	179.	12.6
%RSD	.13653	.19371	.39821	.20960

#1	2531.4	5933.5	44877.	6002.2
#2	2532.4	5937.7	44941.	5995.3
#3	2526.0	5916.0	45215.	5977.8

Raw Data MA13933 page 42 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: FA42390-7 Acquired: 3/28/2017 10:55:01 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 25.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	.0297	85.61	.0282	.0681	-.0026	1.954	-.0014	-.0008	.1617	4.884
Stddev	.0116	.42	.0199	.0057	.0013	.018	.0017	.0000	.0036	.006
%RSD	39.14	.4955	70.72	8.394	48.43	.9228	126.4	6.071	2.197	.1142

#1	.0200	85.96	.0499	.0711	-.0039	1.971	-.0018	-.0008	.1657	4.878
#2	.0426	85.14	.0240	.0615	-.0014	1.955	.0005	-.0007	.1592	4.889
#3	.0265	85.74	.0107	.0717	-.0025	1.935	-.0028	-.0008	.1600	4.885

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	142.3	1.778	2.406	.2871	-.0087	.4630	.0225	42.14	.3164	.0231
Stddev	.5	.581	.053	.0016	.0017	.2743	.0040	.03	.0045	.0311
%RSD	.3502	32.69	2.205	.5714	19.55	59.25	17.92	.0609	1.410	134.5

#1	142.3	1.206	2.370	.2866	-.0098	.7094	.0270	42.15	.3115	.0192
#2	141.9	1.760	2.466	.2858	-.0067	.5120	.0212	42.11	.3175	.0561
#3	142.9	2.368	2.381	.2889	-.0095	.1674	.0193	42.15	.3202	-.0058

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	2.387	.0496	.0139	1.628	-.0068	.2048	.3169
Stddev	.028	.0037	.0023	.058	.0175	.0080	.0004
%RSD	1.187	7.444	16.24	3.556	258.4	3.924	.1231

#1	2.369	.0479	.0134	1.600	-.0125	.2136	.3170
#2	2.373	.0539	.0163	1.589	.0129	.1978	.3165
#3	2.420	.0471	.0119	1.694</			

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Sample Name: FA42259-4 Acquired: 3/28/2017 10:59:09 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 2.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	-0.004	125.2	.0124	1.041	.0046	34.62	.0006	.0062	.1863	.0120
Stddev	.0003	.1	.0003	.001	.0001	.08	.0001	.0000	.0011	.0000
%RSD	82.74	.0794	2.450	.1013	1.694	.2388	12.62	.0891	.6036	.2489

#1	-0.008	125.1	.0127	1.041	.0045	34.66	.0007	.0062	.1860	.0120
#2	-0.001	125.3	.0124	1.043	.0047	34.68	.0006	.0062	.1854	.0120
#3	-0.003	125.2	.0121	1.041	.0046	34.53	.0006	.0062	.1876	.0120

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	14.42	1.967	6.870	.0512	.0020	.6453	.0362	.1164	-0.0004	.0065
Stddev	.06	.025	.055	.0002	.0001	.0071	.0003	.0009	.0015	.0021
%RSD	.4359	1.270	.7969	.2972	3.460	1.095	.8782	.7764	400.3	32.66

#1	14.45	1.975	6.901	.0514	.0020	.6424	.0359	.1174	-.0015	.0079
#2	14.47	1.939	6.903	.0511	.0019	.6533	.0361	.1162	-.0011	.0041
#3	14.35	1.987	6.807	.0512	.0020	.6401	.0365	.1156	.0014	.0076

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	3.718	.0154	2.846	-.1796	-.0041	.1454	.0218
Stddev	.006	.0002	.005	.0002	.0012	.0004	.0001
%RSD	.1666	1.201	.1602	.1325	29.03	.2545	.5975

#1	3.725	.0156	2.842	.1798	-.0054	.1456	.0218
#2	3.715	.0154	2.851	.1797	-.0034	.1450	.0217
#3	3.714	.0153	2.847	.1794	-.0034	.1456	.0220

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2591.2	7754.1	59165.	7629.6
Stddev	4.4	11.7	398.	44.8
%RSD	.16963	.15050	.67291	.58751

#1	2592.3	7751.3	59072.	7617.9
#2	2595.0	7766.9	59601.	7591.9
#3	2586.4	7744.1	58821.	7679.2

Raw Data MA13933 page 45 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: FA42259-4 Acquired: 3/28/2017 11:07:28 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 4.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	-0.009	144.0	.0163	1.178	.0049	39.57	.0006	.0069	.2146	.0132
Stddev	.0009	.2	.0003	.002	.0001	.10	.0002	.0002	.0006	.0007
%RSD	93.23	.1273	1.714	.1697	2.210	.2454	35.56	3.305	.2986	5.449

#1	-0.006	143.8	.0164	1.180	.0048	39.50	.0008	.0069	.2140	.0125
#2	-0.003	143.9	.0160	1.176	.0050	39.53	.0004	.0067	.2148	.0140
#3	-.0019	144.2	.0166	1.178	.0048	39.68	.0007	.0072	.2152	.0131

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	16.70	2.260	7.886	.0591	.0003	.7205	.0415	.1133	-.0034	.0093
Stddev	.03	.048	.089	.0002	.0005	.0249	.0005	.0015	.0026	.0053
%RSD	.1622	2.143	1.130	.2715	180.2	3.456	1.299	1.286	78.47	57.73

#1	16.69	2.290	7.905	.0592	-.0001	.7488	.0410	.1117	-.0064	.0154
#2	16.73	2.204	7.964	.0590	.0001	.7020	.0416	.1138	-.0017	.0059
#3	16.68	2.286	7.789	.0593	.0009	.7106	.0420	.1145	-.0020	.0065

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	9.741	.0178	3.215	.4119	-.0022	.1670	.0241
Stddev	.077	.0007	.002	.0029	.0020	.0010	.0002
%RSD	.7958	4.073	.0551	.6993	89.95	.6216	.7408

#1	9.701	.0180	3.217	.4089	-.0043	.1661	.0239
#2	9.830	.0170	3.215	.4121	-.0019	.1667	.0243
#3	9.691	.0184	3.214	.4146	-.0004	.1681	.0240

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2685.1	7037.0	53877.	6910.3
Stddev	8.1	12.6	120.	41.7
%RSD	.30314	.17917	.22187	.60369

#1	2694.5	7051.5	53747.	6951.2
#2	2680.2	7030.8	53981.	6911.9
#3	2680.6	7028.6	53904.	6867.8

Raw Data MA13933 page 47 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: FA41932-5 Acquired: 3/28/2017 11:03:16 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	-0.001	.8251	-0.004	.0041	-0.002	71.24	-0.002	-0.003	.0025	.0005
Stddev	.0003	.0110	.0003	.0000	.0000	.04	.0000	.0001	.0001	.0002
%RSD	362.2	1.328	75.03	1.195	7.675	.0613	9.872	19.50	.0001	.0022

#1	-0.004	.8183	-0.008	.0041	-0.002	71.20	-0.002	-0.003	.0024	.0004
#2	.0001	.8377	-0.003	.0040	-0.001	71.22	-0.002	-0.003	.0025	.0004
#3	.0001	.8192	-0.002	.0041	-0.002	71.28	-0.002	-0.004	.0026	.0006

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	.2198	.2694	.4786	.0012	.0000	4.656	.0002	.0032	-.0004	.0004
Stddev	.0005	.0321	.0160	.0000	.0001	.013	.0002	.0006	.0015	.0006
%RSD	.2407	11.91	3.345	1.223	378.6	.2698	75.05	19.17	344.0	165.4

#1	.2193	.2467	.4610	.0012	.0000	4.641	.0004	.0028	.0010	.0009
#2	.2198	.3061	.4922	.0012	-0.001	4.664	.0002	.0039	-.0019	-.0003
#3	.2203	.2552	.4827	.0012	.0002	4.662	.0001	.0028	-.0003	.0005

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	1.397	-0.002	.0516	-1.002	-0.008	.0018	.0021
Stddev	.021	.0003	.0001	.0019	.0005	.0001	.0001
%RSD	1.501	183.8	.1263	1.886	63.87	4.388	2.610

#1	1.411	-.0005	.0515	.0981	-.0013	.0017	.0021
#2	1.406	.0001	.0517	.1019	-.0008	.0018	.0021
#3	1.372	.0000	.0516	.1006	-.0003	.0018	.0020

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2607.6	5885.0	45893.	5944.7
Stddev	4.9	2.9	78.	4.3
%RSD	.18807	.04942	.16928	.07291

#1	2602.0	5881.9	45933.	5949.6
#2	2611.1	5887.7	45943.	5943.4
#3	2609.8	5885.2	45804.	5941.3

Raw Data MA13933 page 46 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: CCV Acquired: 3/28/2017 11:11:34 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2517	40.54	2.035	2.063	2.025	40.59	2.080	2.076	2.046	2.017
Stddev	.0014	.02	.004	.003	.004	.09	.002	.002	.007	.002
%RSD	.5440	.0374	.1740	.1565	.1713	.2123	.0933	.0824	.3214	.1000

#1	.2502	40.53	2.032	2.059	2.021	40.55	2.082	2.076	2.039	2.019
#2	.2518	40.53	2.036	2.066	2.026	40.53	2.078	2.074	2.053	2.018
#3	.2529	40.55	2.039	2.063	2.028	40.68	2.080	2.078	2.047	2.015

Check ? Chk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk Pass

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	40.06	40.60	40.04	2.052	2.070	40.94	2.057	2.000	2.030	2.030
Stddev	.03	.01	.16	.004	.003	.04	.002	.001	.004	.004
%RSD	.0781	.0234	.4009	.2012	.1361	.0854	.1126	.0440	.1764	.1992

#1	40.05	40.60	40.07	2.049	2.070	40.90	2.059	2.001	2.030	2.026
#2	40.04	40.59	39.87	2.056	2.068	40.96	2.055	1.999	2.027	2.029
#3	40.10	40.61	40.19	2.050	2.074	40.96	2.057	2.000	2.034	2.034

Check ? Chk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk Pass

Value Range

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.053	2.075	2.060	2.045	2.021	2.058	2.043
Stddev	.003	.002	.006	.001	.003	.005	.004
%RSD	.1251	.0757	.2866	.0432	.1705	.2696	.1728

#1	2.051	2.076	2.053	2.046	2.018	2.053	2.046
#2	2.053	2.073	2.065	2.044	2.025	2.064	2.039
#3	2.056	2.076	2.061	2.045	2.021	2.059	2.042

Check ? Value Range

None Chk PassChk PassChk PassChk PassChk PassChk PassChk Pass

Raw Data



[Zoom In](#)  
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Sample Name: CCV Acquired: 3/28/2017 11:11:34 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2345.6	5760.7	43492.	5708.8
Stddev	2.0	10.7	160.	31.7
%RSD	.08627	.18516	.36877	.55492
#1	2343.8	5753.5	43596.	5690.6
#2	2347.8	5773.0	43307.	5745.4
#3	2345.0	5755.6	43572.	5690.5

Raw Data MA13933 page 49 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: CCB Acquired: 3/28/2017 11:15:31 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2767.6	6077.7	46665.	5889.1
Stddev	4.8	5.8	52.	34.1
%RSD	.17279	.09528	.11189	.57857
#1	2772.9	6082.0	46720.	5898.5
#2	2766.4	6079.9	46617.	5851.3
#3	2763.6	6071.1	46657.	5917.5

Raw Data MA13933 page 51 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: CCB Acquired: 3/28/2017 11:15:31 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.0046	-.0001	.0002	.0003	.0071	.0002	.0001	.0004	.0004
Stddev	.0002	.0033	.0006	.0003	.0001	.0022	.0000	.0001	.0001	.0001
%RSD	118.2	71.95	555.2	105.2	21.41	30.65	6.117	70.39	38.15	36.09
#1	.0001	.0008	-.0005	.0000	.0003	.0070	.0002	.0001	.0004	.0002
#2	.0000	.0066	-.0005	.0005	.0003	.0050	.0002	.0000	.0002	.0005
#3	.0004	.0064	-.0003	.0002	.0002	.0094	.0002	.0001	.0005	.0004

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0069	.0426	.0002	.0003	.0007	.0299	.0000	.0001	.0002	.0000
Stddev	.0044	.0036	.0133	.0000	.0004	.0089	.0001	.0004	.0006	.0006
%RSD	63.89	8.555	8700.	18.62	61.10	29.62	347.6	479.7	264.5	3633.
#1	.0120	.0465	-.0141	.0002	.0011	.0200	.0002	.0004	.0009	.0008
#2	.0042	.0421	.0123	.0003	.0006	.0327	.0001	.0002	.0000	-.0004
#3	.0045	.0393	.0022	.0002	.0003	.0370	-.0001	-.0003	-.0002	-.0003

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	.0003	.0003	.0002	-.0001	.0004	.0001
Stddev	.0003	.0002	.0000	.0001	.0005	.0001	.0000
%RSD	34.87	87.98	7.852	31.35	788.4	15.95	57.70
#1	.0011	.0005	.0003	.0003	-.0006	.0005	.0001
#2	.0006	.0002	.0003	.0002	.0002	.0004	.0000
#3	.0013	.0001	.0003	.0002	.0002	.0004	.0001

Check ? None Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Raw Data MA13933 page 50 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: FA42136-2 Acquired: 3/28/2017 11:20:50 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	-.0002	.0086	-.0012	-.0003	-.0001	.0853	-.0001	.0000	.0000	.0007
Stddev	.0003	.0029	.0004	.0002	.0000	.0020	.0000	.000	.0001	.0002
%RSD	144.8	33.94	31.64	97.80	54.28	2.306	37.97	7669.	665.9	26.29
#1	-.0003	.0061	-.0016	-.0001	-.0001	.0868	-.0001	.0001	-.0001	.0005
#2	-.0005	.0079	-.0010	-.0001	.0000	.0831	-.0001	.0000	.0001	.0009
#3	.0001	.0118	-.0009	-.0005	-.0001	.0861	-.0001	-.0001	.0001	.0007

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	-.0029	.0135	.0015	.0001	-.0005	.0292	-.0001	.0004	-.0015	.0009
Stddev	.0023	.0086	.0040	.0001	.0001	.0064	.0002	.0004	.0007	.0010
%RSD	82.17	63.13	260.6	83.57	21.46	22.09	281.0	99.51	45.43	109.2
#1	-.0008	.0038	.0009	.0000	-.0004	.0293	.0002	.0008	-.0022	.0000
#2	-.0054	.0197	-.0021	.0001	-.0006	.0227	-.0002	.0004	-.0014	.0021
#3	-.0024	.0172	.0059	.0001	-.0006	.0356	-.0003	.0000	-.0009	.0008

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	.9409	.0000	.0001	-.0002	-.0018	-.0002	.0013
Stddev	.0031	.000	.0001	.0001	.0012	.0003	.0001
%RSD	.3319	739.1	133.8	23.73	66.38	130.0	3.942
#1	.9399	.0000	.0002	-.0002	-.0029	.0000	.0012
#2	.9383	.0000	.0000	-.0003	-.0005	-.0001	.0013
#3	.9443	-.0001	.0001	-.0003	-.0019	-.0006	.0013

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2752.1	6064.0	46938.	5934.2
Stddev	5.0	4.8	185.	35.2
%RSD	.18152	.07951	.39308	.59361
#1	2757.6	6064.5	46888.	5899.5
#2	2747.8	6068.5	47142.	5933.1
#3	2750.9	6058.9	46784.	5969.9

Raw Data MA13933 page 52 of 198



[Zoom In](#)  
[Zoom Out](#)

Sample Name: FA42136-3 Acquired: 3/28/2017 11:25:03 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Avg	-0003	-0317	-0108	-2325	-0001	249.0	-0002	-0003	-0009
Stddev	.0004	.0031	.0009	.0012	.0000	1.5	.0000	.0001	.0004
%RSD	119.0	9.649	8.082	.5364	9.520	.5989	16.58	25.38	43.07

#1	-0002	.0282	.0117	.2339	-0001	247.9	-0002	-0003	.0013
#2	.0000	.0334	.0104	.2319	-0001	250.7	-0002	-0002	.0006
#3	-0007	.0336	.0101	.2316	-0002	248.3	-0002	-0002	.0008

Elem	Cu3247	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)
Avg	.0030	-1172	29.89	142.6	.0412	.0031	F291.0	.0031	.0047
Stddev	.0004	.0052	.15	.7	.0002	.0001	3.5	.0001	.0002
%RSD	14.27	4.476	.5103	.4632	.3860	2.050	1.211	4.158	3.919

#1	.0028	.1191	30.07	143.4	.0410	.0030	294.5	.0030	.0049
#2	.0035	.1212	29.81	142.3	.0413	.0031	287.5	.0032	.0045
#3	.0026	.1112	29.79	142.1	.0414	.0031	291.1	.0032	.0048

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	-0015	-0073	25.46	-0004	.9021	.0015	-0013	-0086	-0973
Stddev	.0005	.0004	.05	.0001	.0059	.0001	.0011	.0002	.0002
%RSD	32.80	4.874	.1770	.2762	.6509	8.105	80.49	2.406	.2229

#1	-0018	.0076	25.42	-0005	.9083	.0014	-0023	.0084	.0971
#2	-0017	.0072	25.45	-0003	.8967	.0017	-0002	.0085	.0974
#3	-0009	.0069	25.50	-0005	.9013	.0015	-0015	.0088	.0975

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2180.4	5308.9	40768.	5708.8
Stddev	10.1	12.3	206.	28.4
%RSD	.46246	.23146	.50470	.49781

#1	2191.9	5321.3	40980.	5708.7
#2	2173.5	5308.6	40754.	5680.4
#3	2175.7	5296.7	40569.	5737.2

Raw Data MA13933 page 53 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: FA42136-4 Acquired: 3/28/2017 11:29:27 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Avg	-0003	-0001	-0122	-1883	-0001	237.7	-0002	-0002	-0011
Stddev	.0001	.0053	.0006	.0007	.0000	2.1	.0000	.0001	.0004
%RSD	19.37	7350.	4.584	.3899	40.28	.8846	9.460	52.70	37.01

#1	-0003	-0044	.0128	-1883	-0001	237.5	-0002	-0002	-0007
#2	-0003	-0017	.0116	-1891	-0001	235.7	-0002	-0001	-0011
#3	-0004	-0059	.0123	-1877	-0000	239.9	-0002	-0003	-0015

Elem	Cu3247	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)
Avg	.0027	.0076	36.64	146.9	.2588	.0046	F317.9	-0053	.0045
Stddev	.0003	.0013	.00	.6	.0002	.0002	4.6	.0002	.0009
%RSD	9.293	16.97	.0085	.3784	.0909	4.906	1.440	3.726	19.49

#1	.0026	.0061	36.64	147.2	.2589	.0047	316.3	.0054	.0043
#2	.0030	.0084	36.64	146.3	.2585	.0048	323.1	.0051	.0037
#3	.0025	.0083	36.64	147.2	.2589	.0044	314.3	.0054	.0055

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	-0008	.0074	27.17	-0007	.7885	.0008	-0013	-0092	-0152
Stddev	.0009	.0001	.03	.0001	.0020	.0001	.0004	.0002	.0001
%RSD	114.6	1.062	.0962	17.35	.2530	10.32	28.21	1.904	.3448

#1	-0009	.0074	27.19	-0006	.7890	.0008	-0009	.0091	.0152
#2	-0016	.0075	27.14	-0007	.7903	.0008	-0015	.0094	.0153
#3	.0002	.0074	27.18	-0009	.7864	.0009	-0016	.0091	.0152

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2162.8	5290.6	40281.	5601.9
Stddev	1.6	4.0	95.	39.0
%RSD	.07591	.07595	.23497	.69667

#1	2163.1	5295.0	40291.	5604.7
#2	2161.1	5289.6	40370.	5639.4
#3	2164.3	5287.1	40181.	5561.5

Raw Data MA13933 page 54 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: FA42136-5 Acquired: 3/28/2017 11:33:52 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Avg	.0001	.0318	.0123	.1905	-0001	244.9	-0002	-0001	.0012
Stddev	.0002	.0055	.0004	.0002	.0001	4.3	.0000	.0001	.0001
%RSD	285.4	17.13	3.178	.1033	65.77	1.768	15.13	67.93	11.97

#1	.0003	.0255	.0120	.1904	-0001	245.2	-0002	-0000	.0013
#2	.0001	.0348	.0121	.1907	-0002	249.0	-0002	-0002	.0010
#3	-0002	.0351	.0128	.1903	.0000	240.4	-0002	-0001	.0013

Elem	Cu3247	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)
Avg	.0029	.0568	37.54	151.2	.2669	.0046	F322.4	.0057	.0051
Stddev	.0001	.0011	.07	.4	.0002	.0002	3.8	.0000	.0006
%RSD	3.647	2.021	.1903	.2827	.0713	4.718	1.192	.2018	12.34

#1	.0028	.0555	37.48	150.8	.2671	.0044	318.6	.0057	.0044
#2	.0029	.0572	37.62	151.7	.2668	.0048	322.3	.0057	.0052
#3	.0030	.0577	37.51	151.1	.2669	.0046	326.3	.0057	.0056

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	-0024	.0079	28.26	-0002	.8094	.0018	-0009	-0098	-0144
Stddev	.0004	.0015	.07	.0002	.0034	.0001	.0013	.0002	.0001
%RSD	18.67	19.16	.2568	115.7	.4152	4.110	143.5	2.515	.5805

#1	-0025	.0064	28.20	.0000	.8115	.0019	.0006	.0098	.0144
#2	-0028	.0079	28.24	-0005	.8111	.0017	-0018	.0100	.0143
#3	-0019	.0094	28.34	-0002	.8055	.0019	-0016	.0095	.0145

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2138.9	5205.9	39819.	5580.6
Stddev	4.4	22.8	80.	37.5
%RSD	.20618	.43758	.20144	.67262

#1	2140.5	5223.0	39910.	5620.8
#2	2142.3	5214.8	39758.	5546.5
#3	2133.9	5180.1	39789.	5574.4

Raw Data MA13933 page 55 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: FA42136-6 Acquired: 3/28/2017 11:38:15 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	-0001	-0006	-0014	-0002	-0001	.0601	.0000	-0002	-0001	.0006
Stddev	.0003	.0041	.0001	.0001	.0001	.0005	.000	.0000	.0001	.0003
%RSD	534.3	630.4	3.706	31.65	67.16	.8518	136.7	13.74	179.5	43.29

#1	.0003	-0052	-0015	-0002	-0001	.0600	.0000	-0002	-0001	.0009
#2	-0002	.0027	-0014	-0003	-0001	.0607	.0000	-0002	.0001	.0005
#3	-0003	.0005	-0014	-0002	-0002	.0597	-0001	-0002	-0002	.0004

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	-0058	.0667	.0062	.0000	-0010	.1705	-0001	.0008	-0013	.0010
Stddev	.0019	.0108	.0074	.0000	.0001	.0129	.0001	.0001	.0007	.0008
%RSD	32.88	16.22	118.3	152.2	10.22	7.594	61.42	14.50	53.35	86.68

#1	-0065	.0786	.0015	.0000	-0011	.1847	.0000	.0008	-0016	.0015
#2	-0073	.0641	.0024	.0000	-0009	.1674	-0001	.0010	-0005	.0000
#3	-0037	.0575	.0147	.0000	-0010	.1594	-0002	.0008	-0019	.0014

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	.6171	-0001	.0000	-0004	-0018	-0002	.0011
Stddev	.0026	.0002	.0001	.0000	.0004	.0002	.0001
%RSD	.4224	.235.7	139.8	2.703	22.82	68.43	5.167

#1	.6197	-0003	.0001	-0004	-0018	-0003	.0012
#2	.6145	-0002	.0000	-0004	-0014	-0003	.0011
#3	.6173	.0002	.0001	-0004	-0022	.0000	.0011

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2728.2	5936.9	46968.	5923.1
Stddev	7.0	6.7	125.	83.3
%RSD	.25511	.11239	.26511	1.4066

#1	2721.1</
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Sample Name: FA42275-1 Acquired: 3/28/2017 11:42:27 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	-0002	-0048	-0010	-0342	-0001	65.20	-0001	-0001	-0002	-0007
Stddev	.0004	.0048	.0008	.0001	.0000	.15	.0000	.0001	.0001	.0001
%RSD	159.9	100.3	75.51	.3220	26.62	.2350	30.15	87.81	76.10	17.07

#1	-0001	-0012	-0005	-0341	-0001	65.21	-0001	-0003	-0003	-0006
#2	.0007	.0030	-0019	-0343	-0001	65.35	-0001	-0001	.0000	.0008
#3	.0002	.0103	-0006	-0342	-0001	65.05	-0001	.0000	.0002	.0007

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	.3536	4.622	11.33	.0812	.0002	13.49	.0000	.0057	-0.0008	.0017
Stddev	.0027	.013	.05	.0000	.0001	.03	.000	.0008	.0013	.0015
%RSD	.7698	.2712	.4423	.0594	59.20	.2555	400.6	14.51	151.0	88.39

#1	.3567	4.618	11.38	.0813	.0001	13.52	-0.001	.0050	.0001	.0021
#2	.3517	4.636	11.33	.0813	.0003	13.51	.0000	.0066	-0.0022	.0001
#3	.3523	4.612	11.28	.0812	.0002	13.45	.0000	.0056	-0.0004	.0030

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	.9283	-0.0004	-0.1159	.0015	-0.0007	.0013	.0023
Stddev	.0016	.0003	.0001	.0002	.0004	.0002	.0000
%RSD	.1686	.78.72	.0785	10.55	58.98	17.49	.0888

#1	.9301	-0.0001	-0.1158	.0014	-0.0012	.0015	.0023
#2	.9277	-0.0007	-0.1159	.0015	-0.0004	.0011	.0023
#3	.9271	-0.0004	-0.1159	.0017	-0.0006	.0014	.0023

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2558.7	5785.2	45566.	5897.5
Stddev	1.8	7.8	165.	22.2
%RSD	.07142	.13405	.36108	.37673

#1	2559.2	5776.3	45574.	5914.9
#2	2556.7	5788.8	45398.	5872.5
#3	2560.2	5790.5	45727.	5905.0

Raw Data MA13933 page 57 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: FA42275-2 Acquired: 3/28/2017 11:46:37 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	-0001	-0073	-0003	-0090	-0001	39.48	-0001	-0001	-0005	.0005
Stddev	.0003	.0023	.0006	.0001	.0001	.19	.0000	.0001	.0002	.0002
%RSD	362.6	30.93	190.5	.9944	74.58	.4780	47.29	63.96	46.89	30.02

#1	-0002	-0085	-0010	-0091	-0002	39.29	-0001	-0001	-0005	.0004
#2	-0003	-0047	-0001	-0089	.0000	39.67	-0002	-0001	.0002	.0005
#3	.0003	-0088	-0002	-0089	-0002	39.47	-0001	-0002	.0007	.0007

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	.9348	3.764	5.103	-0.1363	-0.0012	3.460	.0001	.0028	.0000	.0012
Stddev	.0026	.044	.014	.0005	.0002	.008	.0001	.0006	.0007	.0008
%RSD	.2784	1.157	.2769	.3937	12.90	.2235	189.2	19.43	370600.	64.10

#1	.9323	3.724	5.087	-0.1368	-0.0011	3.452	-0.0001	.0034	.0005	.0003
#2	.9346	3.810	5.112	-0.1363	-0.0013	3.467	.0001	.0023	.0003	.0016
#3	.9375	3.756	5.110	-0.1357	-0.0014	3.462	.0001	.0027	-0.0007	.0017

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	.8183	-0.0001	-0.0483	-0.0011	-0.0006	.0003	.0008
Stddev	.0015	.0002	.0003	.0000	.0004	.0002	.0000
%RSD	.1882	147.3	.6799	3.647	73.71	67.12	3.392

#1	.8183	.0000	.0479	.0012	-0.0008	.0004	.0008
#2	.8199	.0000	.0486	.0012	-0.0009	.0001	.0008
#3	.8168	-0.0003	.0483	.0011	-0.0001	.0004	.0007

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2629.9	5896.5	46602.	5947.5
Stddev	4.2	5.0	287.	54.1
%RSD	.16114	.08515	.61530	.91021

#1	2634.3	5902.0	46346.	6007.8
#2	2629.6	5895.2	46549.	5903.2
#3	2625.8	5892.3	46912.	5931.5

Raw Data MA13933 page 58 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: FA42275-3 Acquired: 3/28/2017 11:50:48 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	-0002	-0149	-0001	.0100	-0001	29.73	-0001	-0001	.0003	.0003
Stddev	.0004	.0051	.0006	.0000	.0000	.09	.0000	.0001	.0003	.0001
%RSD	244.9	34.20	442.6	.2266	28.88	.2927	33.28	95.06	100.5	45.17

#1	-0005	.0203	-0.0008	.0100	-0.0001	29.63	-0.0001	-0.0001	.0004	.0002
#2	-0001	.0103	.0000	.0100	-0.0001	29.79	-0.0001	-0.0003	.0000	.0004
#3	.0002	.0139	.0004	.0100	-0.0001	29.77	-0.0001	.0000	.0006	.0002

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	1.772	2.375	5.219	.1157	.0012	4.549	-0.0002	.0132	-0.0004	.0019
Stddev	.006	.012	.007	.0002	.0000	.016	.0001	.0001	.0006	.0008
%RSD	.3631	.5069	.1297	.1793	2.203	.3411	59.60	.6086	135.2	44.87

#1	1.778	2.372	5.217	.1155	-0.0012	4.536	-0.0002	.0131	-0.0010	.0021
#2	1.774	2.364	5.227	.1157	-0.0012	4.547	-0.0004	.0132	.0002	.0009
#3	1.765	2.388	5.214	.1159	-0.0012	4.566	-0.0001	.0132	-0.0004	.0026

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	.9764	-0.0004	-0.0425	.0012	-0.0014	.0002	.0003
Stddev	.0016	.0000	.0001	.0002	.0007	.0002	.0001
%RSD	.1627	13.15	.2996	15.38	49.20	134.9	23.06

#1	.9779	-0.0004	-0.0424	.0013	-0.0022	.0000	-0.0003
#2	.9765	-0.0004	-0.0423	.0010	-0.0008	.0001	-0.0003
#3	.9748	-0.0003	-0.0426	.0013	-0.0013	.0004	-0.0002

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2611.4	5884.6	45847.	5814.7
Stddev	2.4	7.5	213.	44.9
%RSD	.09229	.12709	.46563	.77175

#1	2609.3	5876.8	45990.	5866.3
#2	2614.0	5891.7	45950.	5784.4
#3	2610.8	5885.3	45602.	5793.5

Raw Data MA13933 page 59 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: FA42275-4 Acquired: 3/28/2017 11:54:58 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	.0001	.0076	-0.0014	.0022	-0.0002	47.50	.0000	-0.0002	.0003	.0005
Stddev	.0001	.0131	.0012	.0002	.0000	.06	.000	.0000	.0002	.0003
%RSD	220.7	172.2	86.25	1.037	30.53	.1246	205.9	13.27	60.81	54.26

#1	-0.0001	.0157	-0.0010	.0223	-0.0002	47.46	.0000	-0.0002	.0005	.0003
#2	.0000	-0.0075	-0.0028	.0224	-0.0001	47.48	-0.0001	-0.0002	.0004	.0004
#3	.0002	.0147	-0.0004	.0220	-0.0001	47.57	.0000	-0.0002	.0001	.0008

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	-0.0011	4.475	4.751	.0119	.0010	8.565	-0.0001	.0018	-0.0004	.0075
Stddev	.0011	.004	.011	.0001	.0001	.009	.0001	.0002	.0016	.0017
%RSD	98.95	.0775	.2260	.8177	8.519	.1111	139.4	11.43	357.9	22.51

#1	.0002	4.471	4.741	.0120	.0011	8.555	.0000	.0018	.0000	.0067
#2	-0.0017	4.478	4.750	.0118	.0009	8.574	.0000	.0021	.0009	.0063
#3	-0.0017	4.475	4.762	.0119	.0010	8.565	-0.0003	.0016	-0.0021	.0094

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	.6159	-0.0004	.0933	.0012	-0.0004	.0011	.0004
Stddev	.0015	.0001	.0003	.0002	.0011	.0001	.0000
%RSD	.2451	36.50	.3007	13.09	253.0	8.608	8.668

#1	.6159	-0.0003	.0930	.0012	-0.0015	.0012	.0004
#2	.6144	-0.0005	.0935	.0011	-0.0004	.0012	.0005
#3	.6174	-0.0003	.0935	.0014	.0006	.0010	.0004

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
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[Zoom In](#)  
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Sample Name: FA42275-5 Acquired: 3/28/2017 11:59:09 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	.0001	.8531	-.0008	-.0066	-.0000	28.48	-.0001	-.0004	-.0042	-.0015
Stddev	.0003	.0059	.0004	.0001	.0000	.19	.0001	.0000	.0000	.0002
%RSD	487.1	.6897	48.90	2.116	133.2	.6779	55.21	6.870	1.142	15.48

#1	.0000	.8556	-.0006	.0065	-.0000	28.29	-.0002	-.0004	.0042	-.0015
#2	.0004	.8464	-.0012	.0068	-.0001	28.68	.0001	.0004	.0042	.0012
#3	-.0002	.8574	-.0005	.0066	-.0000	28.48	-.0001	-.0004	.0043	-.0017

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	.1968	1.519	3.510	.0017	-.0008	2.401	-.0006	.0019	-.0001	-.0004
Stddev	.0029	.015	.045	.0000	.0001	.015	.0002	.0004	.0011	.0005
%RSD	1.479	.9831	1.276	1.969	10.41	.6195	30.83	22.80	1387.	103.5

#1	.1939	1.537	3.477	.0016	-.0007	2.385	-.0007	.0023	-.0003	-.0008
#2	.1968	1.512	3.561	.0017	-.0008	2.414	.0007	.0015	.0013	.0001
#3	.1997	1.509	3.492	.0017	-.0008	2.404	.0004	.0018	-.0008	-.0006

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	1.932	-.0004	.0301	.0233	-.0003	-.0066	-.0004
Stddev	.014	.0002	.0003	.0003	.0003	.0001	.0000
%RSD	.7309	56.50	1.048	1.335	75.85	1.218	9.417

#1	1.917	-.0007	.0297	.0235	-.0006	.0067	.0004
#2	1.934	-.0004	.0302	.0229	-.0001	.0065	.0005
#3	1.944	-.0002	.0303	.0233	-.0004	.0065	.0004

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2664.8	6022.3	47134.	6024.4
Stddev	13.2	28.9	278.	22.7
%RSD	.49377	.48017	.58930	.37677

#1	2676.9	6046.1	47312.	6028.3
#2	2666.6	6030.6	47276.	6000.0
#3	2650.8	5990.1	46814.	6044.9

Raw Data MA13933 page 61 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: CCV Acquired: 3/28/2017 12:03:20 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2388.4	5815.5	44331.	5872.7
Stddev	3.4	12.2	107.	15.5
%RSD	.14191	.20999	.24027	.26457

#1	2385.1	5814.7	44374.	5890.6
#2	2391.9	5828.1	44408.	5862.4
#3	2388.1	5803.7	44209.	5865.0

Raw Data MA13933 page 63 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: CCV Acquired: 3/28/2017 12:03:20 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2462	39.88	2.016	2.022	1.971	39.94	2.076	2.069	2.019	1.967
Stddev	.0007	.02	.004	.001	.004	.05	.003	.002	.003	.004
%RSD	.2764	.0441	.2076	.0699	.1929	.1172	.1435	.0868	.1550	.2253

#1	.2465	39.88	2.018	2.022	1.971	39.89	2.077	2.070	2.020	1.968
#2	.2467	39.90	2.012	2.020	1.975	39.99	2.072	2.067	2.016	1.971
#3	.2454	39.87	2.020	2.023	1.967	39.93	2.078	2.070	2.022	1.963

Check ? Chk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk Pass  
Value  
Range

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	38.98	39.71	39.07	2.007	2.042	40.36	2.037	1.953	2.010	2.012
Stddev	.06	.05	.03	.003	.004	.07	.003	.005	.007	.003
%RSD	.1456	.1160	.0753	.1523	.2222	.1739	.1558	.2652	.3681	.1671

#1	38.97	39.73	39.03	2.005	2.040	40.38	2.039	1.954	2.006	2.009
#2	39.04	39.74	39.09	2.005	2.038	40.42	2.034	1.948	2.006	2.011
#3	38.92	39.65	39.08	2.010	2.047	40.28	2.039	1.958	2.019	2.016

Check ? Chk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk Pass  
Value  
Range

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.032	2.063	2.006	1.990	1.975	2.023	2.015
Stddev	.005	.004	.005	.004	.007	.003	.007
%RSD	.2376	.2128	.2370	.1733	.3528	.1446	.3515

#1	2.031	2.064	2.003	1.994	1.975	2.021	2.016
#2	2.028	2.058	2.011	1.991	1.969	2.022	2.008
#3	2.038	2.067	2.003	1.987	1.983	2.026	2.022

Check ? None Chk PassChk PassChk PassChk PassChk PassChk PassChk Pass  
Value  
Range

Raw Data MA13933 page 62 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: CCB Acquired: 3/28/2017 12:07:16 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	-.0015	-.0003	.0001	.0003	.0070	.0002	.0001	.0004	.0004
Stddev	.0002	.0040	.0008	.0001	.0001	.0020	.0001	.0001	.0001	.0002
%RSD	62.20	266.7	303.4	162.9	22.00	28.25	44.62	81.07	36.61	51.60

#1	-.0002	.0026	.0006	.0000	.0003	.0065	.0002	.0002	.0005	.0003
#2	-.0005	-.0054	-.0005	.0000	.0003	.0053	.0002	.0002	.0003	.0003
#3	-.0002	-.0016	-.0009	.0002	.0002	.0092	.0001	.0000	.0003	.0007

Check ? Chk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk Pass  
High Limit  
Low Limit

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0071	-.0050	.0268	.0003	.0007	.0346	.0002	.0005	-.0002	.0014
Stddev	.0023	.0261	.0062	.0000	.0005	.0035	.0001	.0001	.0012	.0011
%RSD	31.85	522.6	22.97	7.193	67.91	10.19	48.52	19.42	551.2	75.66

#1	.0090	-.0279	.0317	.0003	.0012	.0337	.0002	.0005	-.0009	.0009
#2	.0046	-.0105	.0199	.0003	.0007	.0317	.0001	.0005	.0012	.0027
#3	.0078	.0234	.0288	.0003	.0002	.0385	.0002	.0007	-.0010	.0008

Check ? Chk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk Pass  
High Limit  
Low Limit

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009	-.0001	.0004	.0004	-.0004	.0002	.0001
Stddev	.0003	.0001	.0000	.0001	.0005	.0002	.0000
%RSD	32.54	151.7	5.501	35.06	127.8	102.5	10.19

#1	.0011	.0000	.0004	.0005	-.0001	.0002	.0001
#2	.0009	-.0002	.0004	.0005	-.0009	.0004	.0001
#3	.0006	.0000	.0003	.0002	-.0001	.0000	.0001

Check ? None Chk PassChk PassChk PassChk PassChk PassChk PassChk Pass  
High Limit  
Low Limit

Raw Data MA13933 page 64 of 198

Sample Name: CCB Acquired: 3/28/2017 12:07:16 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2780.2	6123.0	46905.	5912.6
Stddev	1.5	8.1	113.	35.2
%RSD	.05320	.13204	.24023	.59478
#1	2779.4	6131.5	47026.	5873.4
#2	2781.9	6115.4	46802.	5941.4
#3	2779.3	6122.3	46888.	5922.9

Raw Data MA13933 page 65 of 198

Sample Name: FA42275-6 Acquired: 3/28/2017 12:11:31 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	-0.001	-0.001	-0.008	-0.0162	-0.001	38.40	-0.001	-0.001	-0.006	-0.007
Stddev	.0002	.0021	.0003	.0001	.0001	.08	.0000	.0001	.0001	.0002
%RSD	166.7	.6363	39.00	.4759	69.23	2066	12.94	68.04	20.51	22.70
#1	-0.003	-0.001	-0.011	-0.0163	-0.000	38.48	-0.001	-0.001	-0.007	-0.008
#2	-0.001	-0.001	-0.006	-0.0161	-0.002	38.33	-0.000	-0.001	-0.007	-0.008
#3	-0.001	-0.001	-0.006	-0.0161	-0.001	38.39	-0.001	-0.000	-0.005	-0.005
Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	1.935	2.733	4.256	-0.0937	-0.0007	8.501	-0.001	.0122	-0.005	.0016
Stddev	.011	.024	.031	.0002	.0001	.009	.0000	.0002	.0008	.0011
%RSD	.576	.8792	.7197	.1826	20.36	1.081	45.97	1.362	161.0	70.79
#1	1.946	2.705	4.277	.0936	-0.006	8.507	-0.000	.0122	-0.015	.0019
#2	1.924	2.748	4.221	.0935	-0.009	8.506	-0.001	.0120	-0.000	.0025
#3	1.933	2.746	4.269	.0939	-0.007	8.491	-0.001	.0123	-0.001	.0003
Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062			
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)			
Avg	1.024	-0.001	.0487	-0.0035	-0.0006	.0002	.0003			
Stddev	.003	.0002	.0002	.0003	.0010	.0001	.0001			
%RSD	.3094	229.3	.3962	7.729	160.7	47.84	18.41			
#1	1.020	-0.002	.0487	.0033	.0005	.0003	.0003			
#2	1.025	.0002	.0485	.0033	-0.014	.0003	.0003			
#3	1.027	-0.002	.0489	.0038	-0.008	.0001	.0004			
Int. Std.	In2306	Y_2243	Y_3600	Y_3710						
Avg	2607.3	5936.1	45796.	5927.1						
Stddev	7.3	3.5	291.	28.6						
%RSD	.27886	.05962	.63532	.48210						
#1	2601.9	5940.0	45671.	5905.5						
#2	2615.6	5934.9	46129.	5916.1						
#3	2604.5	5933.3	45589.	5959.5						

Raw Data MA13933 page 66 of 198

Sample Name: FA42275-7 Acquired: 3/28/2017 12:15:40 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)	(Y_3600)
Avg	-0.002	.0143	.0005	.0060	-0.002	44.55	-0.001	-0.001	.0002	.0003
Stddev	.0002	.0028	.0004	.0002	.0000	.09	.0001	.0000	.0001	.0002
%RSD	79.68	19.55	64.43	4.053	4.790	.1995	68.95	27.42	29.93	56.20
#1	-0.003	.0111	.0003	.0057	-0.002	44.52	-0.001	-0.001	.0002	.0003
#2	-0.004	.0156	.0010	.0061	-0.002	44.48	-0.000	-0.001	.0003	.0005
#3	.0000	.0163	.0002	.0061	-0.002	44.65	-0.001	-0.001	.0003	.0002
Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	.0073	1.433	2.054	.0169	-0.008	3.189	-0.001	.0046	.0001	.0018
Stddev	.0011	.010	.009	.0001	.0001	.004	.0001	.0002	.0003	.0026
%RSD	14.57	.7284	.4506	.7167	9.907	.1257	79.09	5.466	531.7	143.3
#1	.0083	1.421	2.062	.0170	-0.007	3.185	.0000	.0048	.0004	.0041
#2	.0074	1.442	2.055	.0168	-0.009	3.190	-0.003	.0045	-0.002	.0024
#3	.0062	1.435	2.044	.0170	-0.008	3.193	-0.002	.0043	-0.001	.0010
Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062			
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)			
Avg	.3661	-0.001	.0533	.0013	-0.008	.0008	-0.004			
Stddev	.0016	.0002	.0002	.0001	.0007	.0001	.0000			
%RSD	.4383	171.7	.4443	3.993	93.71	11.88	6.884			
#1	.3645	.0001	.0530	.0013	-0.001	.0007	-0.005			
#2	.3660	-0.003	.0534	.0012	-0.016	.0008	-0.004			
#3	.3677	-0.002	.0534	.0013	-0.007	.0009	-0.005			
Int. Std.	In2306	Y_2243	Y_3600	Y_3710						
Avg	2617.7	5905.0	45981.	5920.7						
Stddev	10.4	22.1	225.	30.1						
%RSD	.39559	.37457	.49013	.50917						
#1	2627.0	5927.1	45894.	5919.6						
#2	2619.5	5904.9	46237.	5951.5						
#3	2606.6	5882.9	45812.	5891.2						

Raw Data MA13933 page 67 of 198

Sample Name: FA42275-8 Acquired: 3/28/2017 12:19:51 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	-0.001	.2016	-0.017	.0047	-0.002	43.47	-0.001	-0.001	.0005	.0006
Stddev	.0001	.0107	.0003	.0002	.0001	.13	.0001	.0001	.0003	.0001
%RSD	137.3	5.331	15.33	3.476	78.91	.3008	57.46	86.09	61.99	23.09
#1	-0.001	.2098	-0.016	.0047	-0.000	43.40	-0.001	-0.001	.0007	.0007
#2	-0.001	.2056	-0.020	.0049	-0.003	43.39	-0.001	-0.001	.0002	.0005
#3	.0000	.1894	-0.015	.0045	-0.002	43.62	.0000	-0.002	.0005	.0005
Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	.0107	1.211	2.675	.0188	-0.0009	3.761	.0006	.0016	.0002	.0003
Stddev	.0024	.026	.030	.0001	.0000	.013	.0001	.0003	.0011	.0013
%RSD	22.62	2.183	1.123	.3830	2.280	.3435	11.89	18.17	577.6	364.7
#1	.0134	1.241	2.654	.0188	-0.009	3.748	.0007	.0016	-0.009	-0.005
#2	.0098	1.197	2.661	.0187	-0.009	3.762	.0006	.0019	.0013	.0018
#3	.0088	1.194	2.709	.0188	-0.009	3.773	.0006	.0013	.0001	-0.003
Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062			
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)			
Avg	.6868	-0.003	.0726	.0058	-0.006	.0003	.0003			
Stddev	.0009	.0001	.0003	.0003	.0010	.0001	.0000			
%RSD	.1352	36.63	.3868	4.398	164.8	27.30	3.982			
#1	.6863	-0.002	.0723	.0060	-0.012	.0002	.0003			
#2	.6879	-0.003	.0725	.0055	.0006	.0004	.0003			
#3	.6862	-0.004	.0729	.0058	-0.012	.0003	.0003			
Int. Std.	In2306	Y_2243	Y_3600	Y_3710						
Avg	2638.6	5944.9	45936.	5886.0						
Stddev	7.0	7.5	153.	42.1						
%RSD	.26672	.12589	.33354	.71469						
#1	2632.4	5936.6	46113.	5926.6						
#2	2646.3	5951.1	45837.	5888.9						
#3	2637.2	5947.1	45859.	5842.6						

Raw Data MA13933 page 68 of 198

◀ Zoom In ▶  
Zoom Out

Sample Name: FA42275-9 Acquired: 3/28/2017 12:24:01 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	-0.001	-0.070	-0.003	-0.132	-0.001	60.80	-0.001	-0.002	-0.001	-0.012
Stddev	.0003	.0043	.0008	.0000	.0001	.15	.0000	.0000	.0001	.0002
%RSD	341.2	62.07	313.2	.3305	111.9	.2439	56.88	22.06	217.2	15.66
#1	-0.002	-0.110	-0.000	-0.132	-0.003	60.63	-0.001	-0.002	-0.001	-0.012
#2	-0.001	-0.077	-0.004	-0.133	-0.001	60.92	-0.000	-0.001	-0.001	-0.014
#3	-0.004	-0.024	-0.012	-0.132	-0.000	60.85	-0.001	-0.002	-0.001	-0.010
Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	.0023	1.438	17.03	.0034	.0018	6.141	-0.001	.0022	-0.004	.0018
Stddev	.0013	.026	.05	.0000	.0001	.011	.0001	.0006	.0002	.0018
%RSD	55.48	1.783	.3123	.2296	5.544	.1783	72.72	26.10	46.82	100.7
#1	.0008	1.412	16.96	.0034	.0017	6.128	-.0002	.0016	-.0004	.0020
#2	.0029	1.463	17.05	.0034	.0019	6.148	-.0002	.0022	-.0006	.0036
#3	.0032	1.439	17.06	.0034	.0017	6.146	-.0000	.0027	-.0002	-.0001
Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062			
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)			
Avg	2.229	-0.002	.0516	.0014	-.0018	.0055	.0005			
Stddev	.009	.0003	.0001	.0001	.0003	.0002	.0001			
%RSD	.4092	147.6	.2444	4.967	19.12	3.405	18.84			
#1	2.238	.0000	.0515	.0014	-.0014	.0057	.0004			
#2	2.229	-.0005	.0516	.0013	-.0020	.0055	.0005			
#3	2.219	.0000	.0518	.0015	-.0020	.0053	.0006			
Int. Std.	In2306	Y_2243	Y_3600	Y_3710						
Avg	2571.7	5883.2	45424.	5919.6						
Stddev	4.3	6.7	76.	48.6						
%RSD	.16620	.11332	.16678	.82085						
#1	2573.9	5882.2	45495.	5975.5						
#2	2574.4	5890.3	45344.	5888.0						
#3	2566.8	5877.1	45432.	5895.2						

Raw Data MA13933 page 69 of 198

◀ Zoom In ▶  
Zoom Out

Sample Name: FA42275-10 Acquired: 3/28/2017 12:28:11 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	-0.0001	-0.0059	-0.0010	-0.0077	-0.0001	56.45	-0.0001	-0.0001	-0.0003	-0.0003
Stddev	.0002	.0045	.0009	.0000	.0000	.19	.0000	.0001	.0001	.0000
%RSD	273.0	76.81	86.33	.5649	24.16	.3380	9.065	61.53	40.81	4.238
#1	-0.0003	-0.0031	-0.0000	-0.0077	-0.0001	56.23	-0.0001	-0.0002	-0.0003	-0.0003
#2	-0.0002	-0.0111	-0.0017	-0.0078	-0.0001	56.59	-0.0001	-0.0001	-0.0001	-0.0003
#3	-0.0002	-0.0035	-0.0014	-0.0078	-0.0002	56.51	-0.0001	-0.0001	-0.0004	-0.0003
Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_2243)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	.4529	2.597	7.912	-1.184	-0.0012	4.398	.0000	.0030	-.0008	.0012
Stddev	.0053	.009	.032	.0003	.0002	.015	.0001	.0002	.0007	.0002
%RSD	1.175	.3385	.4089	.2675	15.43	.3482	607.9	5.356	79.65	14.15
#1	.4588	2.605	7.882	-1.187	-0.0011	4.385	.0000	.0028	-.0007	.0010
#2	.4515	2.588	7.946	-1.185	-0.0012	4.415	.0000	.0030	-.0016	.0013
#3	.4484	2.599	7.906	-1.181	-0.0014	4.394	-0.0001	.0031	-.0002	.0012
Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062			
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)			
Avg	-.3771	-.0006	-.1173	.0011	-.0011	.0000	.0014			
Stddev	.0005	.0001	.0000	.0002	.0005	.000	.0000			
%RSD	.1451	9.133	.0328	13.48	44.66	13320.	2.279			
#1	.3765	-.0005	-.1173	.0011	-.0005	-.0002	.0014			
#2	.3776	-.0006	-.1173	.0013	-.0014	-.0001	.0014			
#3	.3772	-.0006	-.1172	.0011	-.0014	.0003	.0015			
Int. Std.	In2306	Y_2243	Y_3600	Y_3710						
Avg	2599.9	5908.9	45761.	5888.6						
Stddev	1.7	9.2	193.	57.2						
%RSD	.06703	.15648	.42223	.97104						
#1	2597.9	5918.2	45714.	5954.4						
#2	2600.6	5899.7	45596.	5850.5						
#3	2601.2	5908.6	45974.	5860.9						

Raw Data MA13933 page 70 of 198

◀ Zoom In ▶  
Zoom Out

Sample Name: FA42282-3 Acquired: 3/28/2017 12:32:21 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	-.0003	.1043	.0006	.0032	-.0001	48.20	-.0002	-.0003	.0004	.0003
Stddev	.0002	.0051	.0004	.0000	.0000	.17	.0000	.0001	.0001	.0003
%RSD	70.12	4.850	73.18	1.227	30.36	.3422	16.76	42.53	28.09	130.9
#1	-.0003	.1077	.0010	.0032	-.0001	48.32	-.0002	-.0003	.0005	.0000
#2	-.0004	.0985	.0006	.0032	-.0001	48.27	-.0002	-.0002	.0003	.0001
#3	-.0001	.1067	.0001	.0032	-.0001	48.01	-.0001	-.0004	.0004	.0006
Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	3.934	.2573	1.805	.0131	.0012	.6628	-.0001	.0013	-.0012	.0013
Stddev	.018	.0288	.014	.0001	.0001	.0044	.0001	.0003	.0002	.0018
%RSD	.4526	11.20	.7554	.7902	6.170	.6682	43.60	24.66	13.48	140.0
#1	3.916	.2783	1.817	.0130	.0013	.6679	-.0001	.0017	-.0013	.0032
#2	3.952	.2244	1.790	.0131	.0011	.6606	-.0002	.0012	-.0010	.0008
#3	3.934	.2690	1.807	.0132	.0013	.6599	-.0002	.0010	-.0012	-.0002
Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062			
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)			
Avg	.8048	-.0003	.0550	-.0028	-.0005	.0010	.0273			
Stddev	.0011	.0002	.0002	.0001	.0007	.0003	.0001			
%RSD	.1313	55.33	.3893	4.664	147.6	32.44	.3941			
#1	.8038	-.0001	.0552	.0028	-.0008	.0007	.0272			
#2	.8047	-.0004	.0547	.0030	.0003	.0011	.0273			
#3	.8059	-.0003	.0550	.0027	-.0010	.0013	.0274			
Int. Std.	In2306	Y_2243	Y_3600	Y_3710						
Avg	2637.8	5950.2	46207.	5891.7						
Stddev	6.7	21.0	276.	56.2						
%RSD	.25214	.35226	.59638	.95311						
#1	2642.0	5971.4	46511.	5846.1						
#2	2641.4	5949.7	46138.	5874.6						
#3	2630.2	5929.5	45973.	5954.4						

Raw Data MA13933 page 71 of 198

◀ Zoom In ▶  
Zoom Out

Sample Name: FA42282-5 Acquired: 3/28/2017 12:36:30 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	-.0002	.0533	.0140	.0112	-.0002	58.66	-.0001	-.0003	.0001	.0004
Stddev	.0002	.0081	.0010	.0001	.0001	.04	.0001	.0000	.0000	.0001
%RSD	90.85	15.16	7.062	1.247	43.60	.0668	53.56	4.575	19.40	32.46
#1	-.0003	.0452	.0130	.0114	-.0002	58.65	-.0001	-.0003	.0001	.0003
#2	-.0004	.0613	.0140	.0111	-.0001	58.70	.0000	-.0003	.0001	.0005
#3	.0000	.0533	.0149	.0112	-.0002	58.62	-.0002	-.0002	.0001	.0005
Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	4.683	.7090	1.675	.0795	.0038	1.092	-.0002	.0012	-.0002	.0013
Stddev	.017	.0250	.027	.0002	.0001	.011	.0001	.0003	.0011	.0014
%RSD	.3650	3.529	1.594	.3004	1.386	.9823	48.38	28.53	556.9	106.8
#1	4.693	.7286	1.645	.0794	.0038	1.095	-.0003	.0015	.0005	.0028
#2	4.693	.6808	1.695	.0798	.0037	1.101	-.0001	.0008	-.0014	.0001
#3	4.663	.7176	1.686	.0795	.0038	1.080	-.0002	.0012	.0003	.0010
Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062			
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)			
Avg	1.627	-.0002	.0793	.0019	-.0013	.0006	.0009			
Stddev	.001	.0002	.0001	.0001	.0007	.0001	.0001			
%RSD	.0779	80.33	.1053	2.732	54.95	15.81	7.956			
#1	1.628	-.0003	.0794	.0019	-.0022	.0007	.0008			
#2	1.628	-.0003	.0793	.0020	-.0011	.0005	.0008			
#3	1.626	.0000	.0793	.0019	-.0008	.0007	.0009			
Int. Std.	In2306	Y_2243	Y_3600	Y_3710						
Avg	2616.5	5892.1	46040.	5933.5						
Stddev	5.3	5.3	171.	22.4						
%RSD	20.441	.09035	.37191	.37809						
#1	2612.1	5887.2	45919.	5912.6						
#2	2622.5	5891.2	45965.	5957.2						
#3	2615.1	5897.8	46236.	5930.7						

◀ Zoom In ▶  
Zoom Out

Sample Name: FA42108-1 Acquired: 3/28/2017 12:40:40 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)	
Avg	-.0002	-.0214	-.0015	-.0305	-.0001	43.61	-.0001	-.0001	-.0004	-.0080
Stddev	-.0002	-.0077	-.0001	-.0001	-.0000	.06	-.0000	-.0000	-.0001	-.0001
%RSD	129.2	36.03	9.690	.1810	69.63	.1404	34.06	31.23	33.83	1.490
#1	.0001	.0140	-.0016	-.0306	-.0000	43.68	-.0001	-.0001	-.0003	-.0079
#2	.0005	.0294	-.0013	-.0304	-.0001	43.57	-.0001	-.0001	-.0003	-.0081
#3	.0000	.0208	-.0015	-.0305	-.0001	43.58	-.0001	-.0001	-.0005	-.0080

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	-.0585	9.591	9.042	-.0029	-.0009	24.95	-.0000	-.0018	-.0012	-.0003
Stddev	-.0017	.019	.045	-.0000	-.0001	.01	-.0001	-.0004	-.0004	-.0010
%RSD	2.977	.1976	.4938	1.004	11.44	.0336	341.7	20.04	32.70	401.0
#1	.0568	9.611	9.093	-.0028	-.0009	24.96	-.0000	-.0019	-.0008	-.0004
#2	.0603	9.589	9.015	-.0029	-.0010	24.95	-.0000	-.0021	-.0013	-.0012
#3	.0584	9.574	9.017	-.0029	-.0008	24.95	-.0001	-.0014	-.0015	-.0008

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	5.007	-.0000	1.065	-.0050	-.0011	-.0001	-.0153
Stddev	.008	-.0002	.002	-.0010	-.0005	-.0000	-.0001
%RSD	.1626	23910.	.1701	19.57	46.08	33.74	.7352
#1	5.008	-.0001	1.064	-.0046	-.0014	-.0002	.0152
#2	5.014	-.0002	1.067	-.0061	-.0005	-.0001	.0153
#3	4.998	-.0001	1.063	-.0043	-.0013	-.0002	.0154

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2559.3	5807.6	45313.	5948.9
Stddev	5.2	2.6	319.	42.6
%RSD	.20368	.04412	.70377	.71681
#1	2565.3	5809.1	45671.	5900.9
#2	2556.9	5804.7	45059.	5963.8
#3	2555.7	5809.1	45209.	5982.2

Raw Data MA13933 page 73 of 198

◀ Zoom In ▶  
Zoom Out

Sample Name: FA42135-1 Acquired: 3/28/2017 12:44:51 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Avg	-.0000	2.844	-.0000	-.2509	-.0001	53.50	-.0003	-.0000	-.0055
Stddev	-.000	.022	.000	-.0002	-.0001	.10	-.0000	.000	-.0001
%RSD	2338.	.7633	1699.	.0902	47.69	.1891	15.98	90.01	2.508
#1	.0000	2.853	-.0001	-.2510	-.0001	53.43	-.0003	-.0000	-.0054
#2	-.0003	2.860	-.0002	-.2506	-.0002	53.62	-.0002	-.0001	-.0057
#3	.0003	2.819	-.0000	-.2509	-.0001	53.46	-.0003	-.0001	-.0055

Elem	Cu3247	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)
Avg	F6.421	-.5617	-.4709	-.7380	-.0053	-.0546	39.00	-.0032	-.0003
Stddev	.007	.0050	.0134	.0198	-.0000	-.0002	.01	-.0002	-.0002
%RSD	.1128	.8956	2.835	2.688	.4820	.3251	.0378	6.410	75.25
#1	6.418	.5594	.4562	-.7389	-.0053	-.0544	39.01	-.0034	-.0003
#2	6.415	.5674	.4743	-.7177	-.0053	-.0546	38.98	-.0030	-.0001
#3	6.429	.5581	.4823	-.7574	-.0053	-.0548	39.01	-.0031	-.0005

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)	(Y_2243)
Avg	-.0006	-.0008	2.267	-.0013	4.867	.0756	-.0017	-.0186	-.2725
Stddev	.0002	.0018	.006	-.0002	.0013	-.0003	-.0008	-.0003	-.0009
%RSD	29.14	222.8	.2746	11.94	.2584	.4223	47.40	1.382	.3219
#1	-.0007	-.0003	2.262	-.0014	4.853	.0753	-.0027	-.0185	-.2715
#2	-.0004	-.0029	2.264	-.0012	4.869	.0758	-.0013	-.0185	-.2728
#3	-.0007	-.0007	2.274	-.0014	4.878	.0758	-.0012	-.0189	-.2732

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2511.2	5753.3	44785.	5801.3
Stddev	6.5	17.2	111.	27.4
%RSD	.25992	.29929	.24730	.47218
#1	2518.8	5770.2	44753.	5797.6
#2	2507.3	5754.0	44693.	5775.9
#3	2507.7	5735.8	44908.	5830.4

Raw Data MA13933 page 74 of 198

◀ Zoom In ▶  
Zoom Out

Sample Name: MP31869-MB1 Acquired: 3/28/2017 12:48:58 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	-.0068	-.0016	-.0003	-.0001	.0134	-.0001	-.0001	-.0001	-.0009
Stddev	-.0004	-.0020	-.0004	-.0001	-.0001	.0020	-.0001	-.0000	-.0001	-.0002
%RSD	383.1	29.20	23.59	35.70	47.18	15.15	40.12	22.21	50.76	26.41
#1	-.0003	-.0045	-.0018	-.0003	-.0001	.0113	-.0001	-.0002	-.0002	-.0010
#2	-.0002	-.0080	-.0012	-.0002	-.0002	.0135	-.0001	-.0002	-.0001	-.0006
#3	-.0005	-.0080	-.0019	-.0003	-.0001	.0154	-.0002	-.0001	-.0002	-.0010

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0074	.0054	-.0019	-.0000	-.0011	.0435	-.0000	-.0001	-.0001	-.0014
Stddev	.0021	.0235	.0125	-.0000	-.0000	.0010	-.0001	-.0007	-.0004	-.0014
%RSD	27.76	435.2	657.8	132.0	3.915	2.244	172.4	788.5	601.2	99.44
#1	-.0097	-.0217	-.0080	-.0000	-.0011	.0425	-.0000	-.0005	-.0001	-.0022
#2	-.0058	-.0177	-.0022	-.0000	-.0012	.0434	-.0001	-.0008	-.0002	-.0024
#3	-.0067	.0202	-.0159	-.0000	-.0011	.0445	-.0000	-.0001	-.0005	-.0002

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0056	-.0002	-.0001	-.0003	-.0020	-.0002	-.0006
Stddev	-.0002	-.0002	-.0001	-.0001	-.0005	-.0001	-.0000
%RSD	3.160	122.6	109.7	16.92	23.16	69.37	4.132
#1	.0058	-.0004	-.0001	-.0003	-.0024	-.0003	-.0006
#2	.0057	-.0000	-.0000	-.0002	-.0020	-.0003	-.0006
#3	.0054	-.0001	-.0000	-.0003	-.0015	-.0000	-.0006

Check ?  
High Limit  
Low Limit

Raw Data MA13933 page 75 of 198

◀ Zoom In ▶  
Zoom Out

Sample Name: MP31869-MB1 Acquired: 3/28/2017 12:48:58 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2757.0	6048.2	47252.	5877.9
Stddev	4.2	14.3	108.	64.5
%RSD	.15110	.23666	.22929	1.0976
#1	2759.8	6057.0	47128.	5808.6
#2	2758.9	6055.8	47328.	5889.0
#3	2752.2	6031.7	47301.	5936.2

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0074	.0054	-.0019	-.0000	-.0011	.0435	-.0000	-.0001	-.0001	-.0014
Stddev	.0021	.0235	.0125	-.0000	-.0000	.0010	-.0001	-.0007	-.0004	-.0014
%RSD	27.76	435.2	657.8	132.0	3.915	2.244	172.4	788.5	601.2	99.44
#1	-.0097	-.0217	-.0080	-.0000	-.0011	.0425	-.0000	-.0005	-.0001	-.0022
#2	-.0058	-.0177	-.0022	-.0000	-.0012	.0434	-.0001	-.0008	-.0002	-.0024
#3	-.0067	.0202	-.0159	-.0000	-.0011	.0445	-.0000	-.0001	-.0005	-.0002

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0056	-.0002	-.0001	-.0003	-.0020	-.0002	-.0006
Stddev	-.0002	-.0002	-.0001	-.0001	-.0005	-.0001	-.0000
%RSD	3.160	122.6	109.7	16.92	23.16	69.37	4.132
#1	.0058	-.0004	-.0001	-.0003	-.0024	-.0003	-.0006
#2	.0057	-.0000	-.0000	-.0002	-.0020	-.0003	-.0006
#3	.0054	-.0001	-.0000	-.0003	-.0015	-.0000	-.0006

Check ?  
High Limit  
Low Limit

Raw Data MA13933 page 76 of 198

Sample Name: CCV Acquired: 3/28/2017 12:53:13 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2501	40.59	2.052	2.064	2.005	40.66	2.104	2.104	2.054	2.001
Stddev	.0003	.08	.002	.002	.002	.06	.004	.004	.004	.002
%RSD	.1304	.1883	.1164	.0971	.1147	.1425	.1793	.1775	.1925	.0981
#1	2501	40.56	2.051	2.061	2.003	40.65	2.105	2.100	2.052	2.003
#2	2498	40.54	2.055	2.065	2.004	40.61	2.112	2.108	2.052	2.002
#3	2504	40.68	2.051	2.065	2.007	40.73	2.107	2.103	2.059	1.999

Check ? Chk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk Pass  
Value  
Range

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	39.60	40.52	39.76	2.047	2.076	41.13	2.072	1.995	2.042	2.049
Stddev	.07	.07	.19	.004	.006	.08	.003	.003	.003	.008
%RSD	.1718	.1620	.4711	.1704	.2874	.2031	.1657	.1533	.1630	.4078
#1	39.59	40.46	39.70	2.047	2.069	41.21	2.068	1.999	2.039	2.042
#2	39.53	40.53	39.61	2.044	2.081	41.04	2.075	1.993	2.046	2.059
#3	39.67	40.59	39.97	2.051	2.078	41.14	2.071	1.995	2.043	2.048

Check ? Chk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk Pass  
Value  
Range

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.066	2.096	2.042	2.020	2.013	2.057	2.050
Stddev	.005	.003	.002	.004	.003	.002	.003
%RSD	.2565	.1265	.0810	.1778	.1449	.1067	.1395
#1	2.061	2.093	2.043	2.023	2.014	2.057	2.048
#2	2.072	2.098	2.041	2.016	2.015	2.055	2.054
#3	2.064	2.096	2.044	2.023	2.010	2.060	2.049

Check ? None Chk PassChk PassChk PassChk PassChk PassChk PassChk Pass  
Value  
Range

Raw Data MA13933 page 77 of 198

Sample Name: CCB Acquired: 3/28/2017 12:57:08 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0042	-.0010	-.0002	.0001	.0023	.0001	.0000	.0001	.0002
Stddev	.000	.0115	.0005	.0000	.0001	.0020	.0000	.0001	.0002	.0002
%RSD	3881.	276.4	44.53	24.70	74.23	87.94	32.36	662.4	138.8	120.9
#1	.0000	.0100	-.0011	-.0001	.0002	.0044	.0001	.0002	-.0001	.0003
#2	-.0002	.0116	-.0015	-.0002	.0001	.0019	.0001	-.0001	.0003	.0003
#3	-.0002	-.0091	-.0005	-.0002	.0000	.0005	.0001	.0000	.0002	-.0001

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0050	.0094	-.0086	.0001	.0007	.0192	.0002	.0005	-.0009	.0004
Stddev	.0021	.0145	.0055	.0000	.0004	.0022	.0001	.0004	.0007	.0013
%RSD	42.99	154.2	64.10	24.73	60.00	11.45	93.62	89.75	73.92	285.3
#1	.0067	-.0044	-.0030	.0001	.0012	.0191	.0002	.0006	-.0015	-.0007
#2	.0056	.0081	-.0088	.0002	.0006	.0215	.0000	.0000	-.0002	.0018
#3	.0026	.0244	-.0139	.0001	.0004	.0171	.0003	.0009	-.0011	.0002

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012	-.0002	.0001	.0001	.0014	.0001	.0001
Stddev	.0003	.0004	.0001	.0000	.0005	.0001	.0001
%RSD	24.54	220.3	74.00	38.34	39.15	73.49	100.6
#1	.0015	.0003	.0002	.0002	.0020	.0001	.0000
#2	.0010	-.0003	.0000	.0001	.0011	.0000	.0002
#3	.0011	-.0005	.0002	.0001	.0010	.0001	.0002

Check ? None Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Raw Data MA13933 page 79 of 198

Sample Name: CCV Acquired: 3/28/2017 12:53:13 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2358.8	5762.6	43792.	5758.4
Stddev	4.0	6.8	232.	62.9
%RSD	.16847	.11751	.52956	1.0920

#1	2354.2	5769.8	43895.	5776.2
#2	2360.2	5756.3	43954.	5810.6
#3	2361.8	5761.8	43526.	5688.6

Raw Data MA13933 page 78 of 198

Sample Name: CCB Acquired: 3/28/2017 12:57:08 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2776.8	6136.1	47259.	5907.2
Stddev	4.3	7.8	144.	12.7
%RSD	.15477	.12706	.30573	.21577

#1	2781.8	6144.9	47373.	5899.9
#2	2774.1	6133.5	47307.	5899.9
#3	2774.7	6130.0	47096.	5921.9

Raw Data MA13933 page 80 of 198



Sample Name: MP31869-B1 Acquired: 3/28/2017 13:01:22 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0470	27.78	2.089	2.099	.0516	25.99	.0532	.5298	.2041	.2552
Stddev	.0005	.10	.006	.009	.0003	.10	.0001	.0017	.0009	.0009
%RSD	1.044	.3722	.2877	.4248	.4946	.3683	.2587	.3150	.4626	.3710
#1	.0470	27.67	2.084	2.089	.0513	25.89	.0531	.5288	.2031	.2542
#2	.0465	27.80	2.088	2.102	.0517	26.01	.0531	.5290	.2050	.2555
#3	.0475	27.87	2.096	2.106	.0518	26.08	.0534	.5318	.2042	.2560

Check ? Chk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk Pass  
Value  
Range

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	26.18	25.90	24.90	.5119	.5841	26.06	.5278	.4936	.5258	2.068
Stddev	.06	.08	.10	.0018	.0017	.07	.0016	.0020	.0020	.007
%RSD	.2314	.3064	.4074	.3583	.2828	.2769	.2948	.4038	.3853	.3216
#1	26.14	25.81	24.82	.5099	.5822	25.99	.5262	.4915	.5262	2.062
#2	26.25	25.93	25.02	.5122	.5852	26.06	.5278	.4938	.5236	2.066
#3	26.15	25.96	24.88	.5135	.5850	26.13	.5293	.4954	.5275	2.075

Check ? Chk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk Pass  
Value  
Range

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0126	.5763	.5541	.5408	2.016	.5005	.5148
Stddev	.0001	.0019	.0020	.0015	.010	.0007	.0017
%RSD	1.068	.3323	.3574	.2801	.4781	.1479	.3329
#1	.0125	.5748	.5519	.5391	2.006	.4997	.5129
#2	.0124	.5757	.5558	.5412	2.025	.5012	.5152
#3	.0127	.5785	.5547	.5420	2.018	.5007	.5162

Check ? None Chk Pass None None Chk PassChk PassChk PassChk Pass  
Value  
Range

Raw Data MA13933 page 81 of 198

Sample Name: FA42308-1F Acquired: 3/28/2017 13:05:22 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	.0000	.0526	.0029	.0173	.0001	96.39	.0001	.0001	.0006	.0017
Stddev	.0001	.0079	.0008	.0002	.0000	.35	.0000	.0001	.0003	.0003
%RSD	380.8	15.12	28.61	1.262	33.30	.3629	19.65	95.76	53.32	17.00
#1	.0001	.0615	.0039	.0171	.0001	96.13	.0001	.0000	.0008	.0019
#2	.0001	.0500	.0025	.0175	.0001	96.25	.0001	.0001	.0008	.0014
#3	.0001	.0462	.0024	.0172	.0001	96.79	.0001	.0001	.0002	.0019

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	.0165	10.94	1.995	.0014	.0018	17.60	.0006	.0039	.0136	.0022
Stddev	.0020	.03	.013	.0000	.0002	.06	.0001	.0003	.0010	.0008
%RSD	11.85	.2397	.6665	1.056	9.148	.3676	13.26	8.260	7.140	35.01
#1	.0186	10.91	1.980	.0014	.0020	17.55	.0007	.0037	.0125	.0013
#2	.0148	10.96	2.005	.0014	.0018	17.58	.0005	.0043	.0140	.0025
#3	.0161	10.95	2.001	.0014	.0016	17.67	.0006	.0038	.0143	.0027

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	2.126	.0000	.6753	.0025	.0014	.0042	.0063
Stddev	.011	.000	.0017	.0001	.0010	.0004	.0001
%RSD	.5049	370.8	.2578	4.771	75.62	10.16	1.129
#1	2.114	.0002	.6733	.0025	.0024	.0046	.0062
#2	2.129	.0001	.6768	.0024	.0003	.0038	.0063
#3	2.135	.0000	.6757	.0026	.0015	.0043	.0064

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2505.5	5752.9	44612	5815.3
Stddev	5.7	15.1	52	53.1
%RSD	.22634	.26193	.11723	.91303
#1	2510.6	5769.4	44573.	5789.8
#2	2499.4	5749.2	44591.	5876.3
#3	2506.5	5740.0	44671.	5779.7

Raw Data MA13933 page 83 of 198

Sample Name: MP31869-B1 Acquired: 3/28/2017 13:01:22 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2469.9	5845.4	45191.	5920.9
Stddev	4.7	10.4	128.	9.3
%RSD	.18893	.17743	.28413	.15743
#1	2474.7	5853.1	45160.	5924.9
#2	2465.4	5849.6	45332.	5910.2
#3	2469.7	5833.6	45081.	5927.5

Raw Data MA13933 page 82 of 198

Sample Name: MP31869-D1 Acquired: 3/28/2017 13:09:33 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)	(Y_3600)
Avg	.0001	.0478	.0019	.0171	.0001	95.68	.0001	.0002	.0004	.0018
Stddev	.0004	.0088	.0006	.0002	.0000	.32	.0001	.0001	.0001	.0003
%RSD	378.5	18.45	33.69	1.005	31.87	.3363	44.06	71.54	27.52	16.76
#1	.0002	.0501	.0015	.0171	.0002	95.35	.0001	.0001	.0003	.0016
#2	.0006	.0381	.0026	.0169	.0001	95.99	.0001	.0001	.0003	.0022
#3	.0000	.0553	.0015	.0172	.0001	95.71	.0002	.0003	.0005	.0017

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	.0052	10.90	2.019	.0013	.0013	17.45	.0004	.0007	.0130	.0016
Stddev	.0015	.03	.015	.0000	.0001	.05	.0001	.0003	.0007	.0014
%RSD	28.27	.2600	.7383	1.858	8.983	.2617	2.111	11.16	5.612	89.90
#1	.0068	10.87	2.032	.0013	.0014	17.42	.0003	.0026	.0134	.0031
#2	.0042	10.92	2.022	.0013	.0011	17.50	.0004	.0025	.0121	.0013
#3	.0045	10.92	2.003	.0013	.0013	17.43	.0004	.0031	.0133	.0003

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	2.108	.0002	.6727	.0022	.0004	.0042	.0057
Stddev	.003	.0003	.0018	.0001	.0008	.0001	.0000
%RSD	.1473	188.0	.2638	5.051	187.7	2.126	.3890
#1	2.111	.0002	.6736	.0021	.0008	.0041	.0057
#2	2.108	.0004	.6739	.0023	.0005	.0042	.0057
#3	2.105	.0001	.6707	.0023	.0009	.0042	.0057

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2515.4	5790.7	44740.	5847.6
Stddev	3.9	7.6	264.	72.8
%RSD	.15443	.13090	.58961	1.2450
#1	2518.8	5792.2	44508.	5925.2
#2	2516.2	5782.5	44686.	5780.9
#3	2511.2	5797.5	45027.	5836.6

Raw Data MA13933 page 84 of 198



[Zoom In](#)  
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Sample Name: MP31869-SD1      Acquired: 3/28/2017 13:13:46      Type: Unk  
Method: 60102007\_041712(v608)      Mode: CONC      Corr. Factor: 5.000000  
User: admin      SSTRACE02:      Custom ID2:      Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	.0004	.0162	-.0017	.0170	-.0004	97.50	-.0002	-.0006	.0013	.0028
Stddev	.0015	.0310	.0002	.0007	.0001	.12	.0002	.0001	.0020	.0008
%RSD	333.8	190.6	9.203	3.990	32.76	.1208	119.6	20.48	148.2	29.45

#1	.0009	.0051	-.0018	.0170	-.0003	97.41	-.0004	-.0004	.0029	.0027
#2	.0017	.0512	-.0016	.0177	-.0003	97.45	-.0001	-.0006	-.0009	.0020
#3	-.0012	-.0076	-.0019	.0164	-.0005	97.63	.0000	-.0006	.0020	.0036

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	-.0301	11.10	2.174	.0031	-.0041	17.80	-.0005	.0045	.0112	.0107
Stddev	.0038	.08	.059	.0003	.0007	.04	.0004	.0024	.0030	.0041
%RSD	12.58	.7415	2.731	8.039	16.20	.1984	84.60	54.49	26.44	38.30

#1	-.0337	11.05	2.233	.0033	-.0044	17.77	-.0007	.0022	.0141	.0109
#2	-.0261	11.19	2.114	.0028	-.0033	17.80	.0000	.0042	.0114	.0065
#3	-.0306	11.06	2.176	.0033	-.0045	17.84	-.0008	.0070	.0081	.0147

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	2.117	-.0008	.6807	.0051	.0018	-.0037	.0092
Stddev	.008	.0006	.0010	.0005	.0020	.0010	.0002
%RSD	.3886	73.05	.1454	10.30	111.8	27.12	2.153

#1	2.126	-.0013	.6797	.0048	-.0001	.0036	.0093
#2	2.115	-.0007	.6817	.0057	.0039	.0028	.0092
#3	2.110	-.0002	.6808	.0048	.0017	.0048	.0089

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2639.8	5930.6	45470.	5808.3
Stddev	7.2	5.5	211.	35.2
%RSD	.27308	.09258	.46341	.60576

#1	2632.7	5926.2	45599.	5842.3
#2	2647.1	5928.9	45227.	5810.7
#3	2639.6	5936.8	45584.	5772.0

Raw Data MA13933 page 85 of 198

[Zoom In](#)  
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Sample Name: MP31869-PS1      Acquired: 3/28/2017 13:18:00      Type: Unk  
Method: 60102007\_041712(v608)      Mode: CONC      Corr. Factor: 1.000000  
User: admin      SSTRACE02:      Custom ID2:      Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	.0454	2.726	.1120	.2934	.0528	99.92	.0533	.0535	.0535	.1079
Stddev	.0006	.016	.0004	.0010	.0001	.08	.0001	.0000	.0002	.0002
%RSD	1.321	.6016	.3540	.3282	.0993	.0766	.2681	.0549	.4203	.1851

#1	.0448	2.711	.1116	.2924	.0529	99.84	.0534	.0536	.0532	.1079
#2	.0460	2.722	.1124	.2937	.0529	99.95	.0531	.0535	.0536	.1080
#3	.0454	2.743	.1119	.2942	.0528	99.99	.0534	.0535	.0536	.1076

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	3.158	21.43	7.143	.0544	.1155	27.89	.1060	.0522	.1253	.1062
Stddev	.010	.04	.034	.0000	.0002	.02	.0002	.0011	.0012	.0010
%RSD	.3229	.1731	.4773	.0784	.1809	.0798	.1811	2.120	.9739	.9736

#1	3.146	21.39	7.121	.0544	.1156	27.88	.1059	.0533	.1254	.1052
#2	3.164	21.44	7.182	.0544	.1157	27.88	.1059	.0511	.1240	.1072
#3	3.164	21.46	7.126	.0544	.1153	27.92	.1062	.0523	.1265	.1060

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	2.125	.0525	.7221	.1092	.0983	.0568	.2688
Stddev	.006	.0004	.0010	.0003	.0008	.0001	.0006
%RSD	.2755	.7403	.1441	.3099	.8023	.1175	2057

#1	2.122	.0528	.7213	.1092	.0992	.0569	.2694
#2	2.121	.0527	.7218	.1095	.0977	.0568	.2686
#3	2.132	.0521	.7233	.1088	.0979	.0568	.2684

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2464.8	5785.9	44433.	5759.8
Stddev	8.4	11.0	138.	53.9
%RSD	.34176	.18941	.31115	.93519

#1	2455.4	5773.3	44274.	5813.9
#2	2467.4	5791.1	44498.	5706.1
#3	2471.7	5793.2	44527.	5759.3

Raw Data MA13933 page 86 of 198

[Zoom In](#)  
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Sample Name: MP31869-S1      Acquired: 3/28/2017 13:22:04      Type: Unk  
Method: 60102007\_041712(v608)      Mode: CONC      Corr. Factor: 1.000000  
User: admin      SSTRACE02:      Custom ID2:      Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	.0478	28.43	2.082	2.167	.0535	117.3	.0510	.5095	.2060	.2624
Stddev	.0002	.02	.001	.003	.0000	.1	.0000	.0001	.0006	.0006
%RSD	.5005	.0673	.0392	.1277	.0728	.1142	.0848	.0138	.3059	.2282

#1	.0481	28.41	2.082	2.165	.0534	117.1	.0511	.5095	.2066	.2623
#2	.0477	28.43	2.083	2.170	.0534	117.4	.0510	.5095	.2060	.2630
#3	.0477	28.45	2.082	2.167	.0535	117.3	.0510	.5096	.2053	.2618

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	26.98	37.11	27.18	.5218	.5813	42.97	.5149	.5031	.5358	2.055
Stddev	.04	.06	.02	.0018	.0005	.02	.0004	.0011	.0009	.004
%RSD	.1302	.1581	.0640	.3481	.0775	.0434	.0809	.2095	.1705	.1984

#1	26.99	37.08	27.16	.5236	.5809	42.98	.5154	.5028	.5348	2.052
#2	27.00	37.18	27.20	.5218	.5811	42.98	.5149	.5043	.5365	2.053
#3	26.94	37.08	27.19	.5199	.5818	42.95	.5146	.5022	.5361	2.060

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	2.060	.5581	1.228	.5573	2.033	.5141	.5123
Stddev	.001	.0007	.002	.0022	.002	.0021	.0004
%RSD	.0697	.1248	.1840	.3897	.1120	.4062	.0708

#1	2.058	.5586	1.229	.5585	2.031	.5164	.5123
#2	2.061	.5583	1.230	.5587	2.036	.5134	.5120
#3	2.061	.5573	1.226	.5548	2.033	.5124	.5127

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2369.8	5837.7	43898.	5768.2
Stddev	2.0	4.5	214.	8.7
%RSD	.08600	.07664	.48808	.15131

#1	2369.9	5837.5	43673.	5758.2
#2	2367.7	5833.3	43920.	5772.0
#3	2371.8	5842.3	44100.	5774.3

Raw Data MA13933 page 87 of 198

[Zoom In](#)  
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Sample Name: MP31869-S2      Acquired: 3/28/2017 13:26:02      Type: Unk  
Method: 60102007\_041712(v608)      Mode: CONC      Corr. Factor: 1.000000  
User: admin      SSTRACE02:      Custom ID2:      Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	.0474	27.93	2.054	2.137	.0530	118.5	.0505	.5037	.2026	.2592
Stddev	.0004	.07	.004	.008	.0002	.3	.0001	.0010	.0009	.0002
%RSD	.8537	.2650	.1733	.3757	.4176	.2164	.1390	.1910	.4682	.0700

#1	.0475	27.84	2.058	2.129	.0530	118.2	.0506	.5043	.2037	.2591
#2	.0477	27.97	2.052	2.140	.0528	118.6	.0504	.5026	.2022	.2594
#3	.0469	27.97	2.053	2.144	.0533	118.7	.0505	.5043	.2020	.2591

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	26.45	36.82	26.70	.5147	.5764	42.67	.5086	.4962	.5281	2.034
Stddev	.05	.10	.01	.0009	.0016	.09	.0005	.0014	.0016	.002
%RSD	.1780	.2739	.0276	.1760	.2856	.2032	.0977	.2901	.2950	.0968

#1	26.42	36.70	26.70	.5155	.5782	42.62	.5091	.4978	.5299	2.036
#2	26.42	36.90	26.69	.5148	.5762	42.61	.5085	.4958	.5275	2.032
#3	26.51	36.85	26.71	.5137	.5749	42.77	.5081	.4951	.5270	2.034

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	2.084	.5532	1.239	.5537	2.005	.5076	.5041
Stddev	.006	.0015	.004	.0022	.003	.0013	.0008
%RSD	.2772	.2643	.3255	.4010	.1715	.2592	.1505

#1	2.089	.5549	1.238	.5562	2.005	.5086	.5050
#2	2.078	.5521	1.236	.5524	2.008	.5082	.5037
#3	2.085	.5526	1.244	.5524	2.002	.5061	.5037

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2372.7	5852.1	44138.	5818.9
Stddev	2.5	8.9	256.	57.5
%RSD				

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Sample Name: FA42308-2F Acquired: 3/28/2017 13:30:00 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	-0.001	-0.238	-0.006	-0.109	-0.002	62.24	-0.001	-0.001	-0.003	-0.008
Stddev	.0004	.0026	.0002	.0002	.0000	.37	.0000	.0000	.0002	.0001
%RSD	553.0	11.08	40.34	1.979	31.45	.5907	21.90	26.11	66.57	17.05

#1	-0.005	.0267	.0009	.0111	-0.002	61.82	-0.001	-0.002	.0004	.0009
#2	.0003	.0215	.0004	.0110	-0.001	62.51	-0.001	-0.001	.0005	.0008
#3	.0000	.0233	.0006	.0107	-0.002	62.40	-0.001	-0.001	.0001	.0006

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	.0340	1.976	1.083	.0023	.0073	7.397	.0000	.0024	.0088	.0021
Stddev	.0026	.009	.024	.0001	.0001	.041	.0001	.0003	.0002	.0006
%RSD	7.578	.4829	2.246	2.209	1.926	.5545	411.9	13.49	2.347	27.47

#1	.0361	1.987	1.067	.0022	.0074	7.354	.0000	.0023	.0086	.0026
#2	.0349	1.973	1.111	.0023	.0074	7.435	.0001	.0021	.0090	.0015
#3	.0311	1.969	1.071	.0023	.0071	7.402	.0000	.0028	.0087	.0021

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	1.765	-0.002	.3923	.0019	.0016	-0.012	-0.052
Stddev	.001	.0001	.0015	.0001	.0007	.0001	.0001
%RSD	.0603	73.07	.3861	4.392	44.93	5.161	1.348

#1	1.765	-0.003	.3905	.0019	.0025	.0011	.0053
#2	1.763	-0.001	.3930	.0019	.0012	.0012	.0051
#3	1.765	-0.001	.3933	.0020	.0013	.0013	.0052

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2559.5	5824.0	44909.	5801.4
Stddev	7.4	12.0	149.	66.7
%RSD	.28885	.20667	.33106	1.1503

#1	2553.6	5826.6	44997.	5826.6
#2	2557.2	5810.9	44738.	5725.7
#3	2567.8	5834.6	44993.	5851.9

Raw Data MA13933 page 89 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: FA42308-1 Acquired: 3/28/2017 13:38:22 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	.0002	1.796	.0022	.0192	-0.001	108.1	-0.001	.0000	.0053	.0025
Stddev	.0002	.004	.0007	.0003	.0000	.7	.0000	.000	.0002	.0001
%RSD	101.1	.2474	30.67	1.480	40.66	.6603	25.86	371.1	3.062	5.078

#1	.0002	1.796	.0020	.0189	-0.002	107.3	-0.001	.0001	.0053	.0025
#2	.0000	1.795	.0030	.0194	-0.001	108.2	-0.001	-0.001	.0052	.0023
#3	.0003	1.803	.0018	.0194	-0.001	108.7	-0.001	-0.001	.0055	.0025

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	.4886	11.00	2.111	.0037	.0009	17.94	.0018	.0119	.0133	.0019
Stddev	.0048	.07	.035	.0000	.0001	.08	.0001	.0008	.0011	.0011
%RSD	.9808	.6149	1.664	1.178	5.388	.4308	6.297	6.435	8.448	56.31

#1	.4854	10.93	2.071	.0036	.0010	17.86	.0019	.0110	.0145	.0029
#2	.4862	11.05	2.136	.0037	.0009	17.94	.0017	.0124	.0125	.0021
#3	.4941	11.04	2.126	.0037	.0009	18.02	.0017	.0122	.0127	.0008

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	3.685	-0.002	.7860	.0767	-0.002	.0065	.0113
Stddev	.019	.0003	.0039	.0056	.0011	.0001	.0002
%RSD	.5216	124.2	.4973	7.285	482.3	1.926	1.379

#1	3.700	-0.001	.7817	.0803	-0.014	.0064	.0115
#2	3.663	.0004	.7868	.0702	.0007	.0066	.0113
#3	3.691	.0003	.7894	.0795	.0001	.0065	.0112

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2486.6	5762.1	44811.	5871.5
Stddev	6.5	7.7	119.	70.8
%RSD	.26177	.13320	.26467	1.2064

#1	2493.9	5767.0	44916.	5952.9
#2	2481.2	5766.2	44682.	5824.1
#3	2484.8	5753.3	44834.	5837.5

Raw Data MA13933 page 91 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: FA42308-3F Acquired: 3/28/2017 13:34:10 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	-0.000	-0.295	-0.003	-0.108	-0.001	64.94	-0.001	-0.001	-0.003	.0031
Stddev	.0004	.0063	.0008	.0003	.0000	.14	.0000	.0001	.0002	.0002
%RSD	12360.	21.46	292.7	2.374	18.60	.2154	16.58	105.4	75.34	5.459

#1	-0.000	-0.222	-0.008	.0109	-0.002	64.81	-0.001	-0.002	.0004	.0032
#2	-0.004	.0338	.0006	.0105	-0.002	64.91	-0.002	-0.000	.0004	.0032
#3	-0.004	.0325	-0.005	.0110	-0.001	65.09	-0.001	-0.001	.0000	.0029

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	-0.000	3.269	1.717	-0.092	-0.028	8.647	.0001	.0026	.0074	.0021
Stddev	.002	.006	.010	.0001	.0001	.017	.0002	.0005	.0007	.0016
%RSD	4547.	.1886	.5840	1.126	3.249	.1968	139.8	19.61	9.292	77.79

#1	-0.002	3.266	1.706	.0091	.0029	8.630	-0.002	.0029	.0078	.0005
#2	-0.019	3.276	1.724	.0092	.0028	8.647	-0.001	.0029	.0066	.0037
#3	-0.016	3.265	1.722	.0093	.0027	8.664	-0.002	.0020	.0078	.0020

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	3.112	-0.003	.4890	-0.017	.0003	.0031	.0040
Stddev	.004	.0003	.0017	.0001	.0001	.0002	.0001
%RSD	.1113	117.5	.3505	6.273	37.36	6.817	1.500

#1	3.114	-0.002	.4880	.0016	.0003	.0032	.0040
#2	3.108	.0000	.4880	.0017	.0005	.0033	.0040
#3	3.114	-0.006	.4910	.0018	.0003	.0029	.0039

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2556.7	5792.2	44865.	5802.4
Stddev	5.7	8.2	329.	24.5
%RSD	.22211	.14208	.73281	.42222

#1	2563.3	5801.8	45245.	5808.4
#2	2553.5	5787.3	44661.	5775.5
#3	2553.3	5787.7	44690.	5823.3

Raw Data MA13933 page 90 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: CCV Acquired: 3/28/2017 13:42:31 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2463	40.01	2.034	2.029	1.962	40.09	2.102	2.097	2.027	1.968
Stddev	.0006	.03	.003	.002	.003	.07	.002	.002	.007	.007
%RSD	.2366	.0832	.1487	.0757	.1338	.1851	.0995	.0881	.3707	.3825

#1	.2465	40.00	2.032	2.029	1.960	40.09	2.103	2.099	2.027	1.972
#2	.2457	39.99	2.037	2.031	1.962	40.01	2.102	2.097	2.020	1.959
#3	.2469	40.05	2.032	2.028	1.965	40.16	2.099	2.095	2.035	1.972

Check ?	Chk	Pass	Chk	Pass	Chk	Pass	Chk	Pass	Chk	Pass	Chk	Pass	Chk	Pass	Chk	Pass	Chk	Pass	Chk	Pass
Value																				
Range																				

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	38.67	39.78	39.05	2.009	2.054	40.69	2.054	1.953	2.024	2.032
Stddev	.12	.02	.11	.004	.002	.11	.002	.005	.000	.004
%RSD	.3047	.0570	.2837	.2129	.0871	.2629	.0811	.2738	.0133	.2168

#1	38.84	39.76	39.04	2.010	2.054	40.79	2.055	1.951	2.024	2.031
#2	38.78	39.78	38.94	2.004	2.052	40.58	2.053	1.959	2.024	2.037
#3	39.01	39.81	39.17	2.012	2.055	40.72	2.052	1.949	2.024	2.028

Check ?	Chk	Pass	Chk	Pass	Chk	Pass	Chk	Pass	Chk	Pass	Chk	Pass	Chk	Pass	Chk	Pass	Chk	Pass	Chk	Pass
Value																				
Range																				

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.047	2.081	2.000	1.984</			

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Sample Name: CCV Acquired: 3/28/2017 13:42:31 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2386.9	5793.1	44422.	5847.8
Stddev	8.6	9.6	198.	48.6
%RSD	.36143	.16511	.44470	.83164
#1	2395.6	5804.0	44515.	5865.9
#2	2378.3	5789.2	44556.	5884.9
#3	2386.9	5786.1	44195.	5792.8

Raw Data MA13933 page 93 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: CCB Acquired: 3/28/2017 13:46:26 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2731.5	5988.3	46338.	5844.5
Stddev	8.4	3.2	164.	27.4
%RSD	.30571	.05311	.35301	.46936
#1	2729.4	5991.3	46220.	5815.0
#2	2740.7	5985.0	46525.	5869.2
#3	2724.5	5988.7	46269.	5849.3

Raw Data MA13933 page 95 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: CCB Acquired: 3/28/2017 13:46:26 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	.0023	-.0003	-.0001	.0001	.0041	.0001	.0000	.0000	.0005
Stddev	.0002	.0049	.0007	.0003	.0001	.0037	.0000	.0000	.000	.0002
%RSD	185.7	212.6	202.3	206.2	62.97	90.03	29.15	72.52	603.5	39.64
#1	-.0001	.0039	-.0011	-.0003	.0002	.0065	.0001	.0000	.0001	.0003
#2	-.0003	.0063	-.0002	-.0003	.0001	.0058	.0001	.0000	.0000	.0006
#3	-.0001	-.0032	.0003	.0002	.0001	-.0001	.0001	.0001	-.0003	.0006

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0089	.0124	.0013	.0002	.0007	.0290	.0001	.0005	.0000	.0007
Stddev	.0045	.0152	.0112	.0000	.0003	.0078	.0001	.0002	.0012	.0003
%RSD	50.90	122.3	864.7	7.915	38.32	26.98	41.57	52.10	2489.	44.41
#1	.0127	.0127	.0067	.0002	.0009	.0250	.0001	.0004	.0013	.0004
#2	.0100	.0275	.0088	.0002	.0007	.0380	.0002	.0007	.0001	.0009
#3	.0039	-.0029	-.0116	.0002	.0004	.0239	.0001	.0003	-.0012	.0009

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011	.0002	.0002	.0002	.0006	.0002	.0001
Stddev	.0002	.0001	.0000	.0001	.0003	.0001	.0001
%RSD	14.22	50.00	17.79	47.68	42.71	81.92	102.8
#1	.0013	.0001	.0001	.0003	.0009	.0000	.0000
#2	.0011	.0003	.0002	.0001	.0005	.0002	.0000
#3	.0010	.0003	.0002	.0003	.0004	.0003	.0001

Check ? None Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Raw Data MA13933 page 94 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: FA42308-2 Acquired: 3/28/2017 13:50:40 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	.0000	.4654	.0013	.0125	-.0001	86.61	-.0001	-.0002	.0023	.0009
Stddev	.000	.0018	.0004	.0002	.0000	.20	.0000	.0001	.0002	.0001
%RSD	2016.	.3811	31.12	1.443	39.01	.2328	24.11	36.98	8.974	12.03

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	.4134	2.045	1.151	.0031	.0073	7.811	.0005	.0032	.0059	.0028
Stddev	.0023	.026	.007	.0000	.0002	.016	.0002	.0001	.0005	.0014
%RSD	.5560	1.294	.5818	1.492	2.898	.2043	44.89	2.709	8.451	50.16
#1	.4108	2.070	1.145	.0031	.0076	7.812	.0007	.0032	.0059	.0044
#2	.4141	2.017	1.149	.0032	.0074	7.795	.0003	.0031	.0064	.0016
#3	.4152	2.047	1.158	.0031	.0071	7.827	.0006	.0032	.0054	.0025

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	2.355	-.0001	.7284	.0188	-.0007	.0025	.0010
Stddev	.007	.0002	.0022	.0026	.0004	.0003	.0000
%RSD	.2943	261.2	.2961	13.79	52.60	10.55	3.456

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2537.3	5807.9	44913.	5820.4
Stddev	3.3	10.3	271.	39.8
%RSD	.12992	.17677	.60318	.68464
#1	2540.6	5796.1	44665.	5847.4
#2	2537.3	5812.9	45202.	5839.1
#3	2534.0	5814.7	44671.	5774.6

Raw Data MA13933 page 96 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: FA42308-3 Acquired: 3/28/2017 13:54:52 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	-0.004	.2920	-.0002	.0121	-.0001	72.64	-.0001	-.0002	.0012	.0035
Stddev	.0001	.0048	.0010	.0001	.0000	.22	.0000	.0001	.0004	.0001
%RSD	34.01	1.645	596.9	1.063	20.26	.3086	41.40	50.18	28.30	3.288

#1	-.0005	.2901	-.0003	.0122	-.0001	72.39	-.0000	-.0001	.0016	-.0033
#2	-.0002	.2884	-.0014	.0120	-.0001	72.71	-.0001	-.0002	.0011	.0036
#3	-.0004	.2975	-.0006	.0122	-.0001	72.82	-.0001	-.0003	.0010	.0035

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	.0752	3.551	1.817	.0100	.0030	9.308	.0003	.0037	.0072	.0019
Stddev	.0038	.019	.022	.0000	.0001	.034	.0001	.0006	.0008	.0004
%RSD	4.994	.5448	1.188	.2913	4.215	.3669	45.59	15.90	10.86	22.04

#1	.0793	3.534	1.797	.0100	.0032	9.279	.0002	.0044	.0078	.0023
#2	.0746	3.546	1.840	.0101	.0029	9.346	.0004	.0036	.0074	.0016
#3	.0718	3.572	1.814	.0100	.0030	9.301	.0002	.0032	.0063	.0017

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	3.502	-.0003	.5836	.0139	-.0004	.0033	.0020
Stddev	.002	.0001	.0027	.0056	.0003	.0002	.0000
%RSD	.0494	45.96	.4592	40.24	82.59	5.264	1.008

#1	3.501	-.0002	.5805	.0204	-.0003	.0034	.0020
#2	3.504	-.0004	.5853	.0102	-.0001	.0031	.0020
#3	3.501	-.0004	.5849	.0112	-.0007	.0034	.0020

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2553.3	5855.7	44775.	5798.0
Stddev	1.3	2.6	177.	45.2
%RSD	.05273	.04420	.39446	.78014

#1	2551.8	5857.6	44612.	5761.9
#2	2553.6	5856.8	44963.	5848.7
#3	2554.4	5852.8	44749.	5783.4

Raw Data MA13933 page 97 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: FA42313-1 Acquired: 3/28/2017 13:59:05 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	-.0001	.1510	-.0085	-.0096	-.0001	101.0	-.0001	.0001	.0006	.0014
Stddev	.0001	.0092	.0002	.0003	.0000	.5	.0000	.0002	.0001	.0001
%RSD	160.9	6.081	2.748	3.208	28.60	.4714	29.33	358.5	13.99	6.149

#1	-.0001	.1599	.0083	.0093	-.0001	100.7	-.0001	.0003	.0006	.0014
#2	-.0002	.1416	.0084	.0095	-.0001	100.9	-.0001	-.0001	.0005	.0014
#3	.0001	.1514	.0088	.0099	-.0001	101.6	-.0001	.0000	.0007	.0015

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	.1814	4.363	5.613	.0097	.0012	19.67	.0005	.0024	-.0006	.0022
Stddev	.0014	.007	.032	.0000	.0002	.06	.0001	.0003	.0003	.0006
%RSD	.7694	.1573	.5717	.3403	12.74	.3217	21.42	12.48	58.03	29.26

#1	.1830	4.356	5.577	.0097	.0011	19.63	.0005	.0026	-.0003	.0024
#2	.1807	4.364	5.621	.0098	.0014	19.64	.0003	.0025	-.0009	.0028
#3	.1805	4.370	5.640	.0097	.0013	19.75	.0005	.0021	-.0005	.0015

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	4.232	-.0001	.2932	.0042	-.0012	.0004	.0024
Stddev	.011	.0001	.0010	.0002	.0005	.0002	.0000
%RSD	.2500	82.25	.3492	3.628	40.64	59.92	1.303

#1	4.220	.0000	.2928	.0042	-.0006	.0004	.0024
#2	4.237	-.0002	.2925	.0043	-.0015	.0002	.0024
#3	4.239	-.0003	.2944	.0040	-.0014	.0006	.0024

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2513.2	5818.6	44677.	5860.9
Stddev	8.3	10.7	35.	76.5
%RSD	.33033	.18314	.07888	1.3051

#1	2519.0	5827.1	44669.	5948.6
#2	2503.7	5806.7	44646.	5825.9
#3	2517.0	5822.1	44715.	5808.1

Raw Data MA13933 page 98 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: FA42384-1 Acquired: 3/28/2017 14:03:16 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	.0000	.0756	-.0002	.0195	-.0001	4.602	-.0001	.0001	.0001	.0025
Stddev	.0003	.0020	.0007	.0001	.0000	.002	.0000	.0000	.0002	.0001
%RSD	1309.0	2.710	396.0	.6423	21.57	.0342	48.53	86.96	322.7	2.571

#1	-.0001	.0762	-.0010	.0196	-.0001	4.603	-.0001	.0001	.0001	.0024
#2	-.0002	.0774	-.0001	.0193	-.0001	4.600	.0000	.0000	-.0001	.0025
#3	.0003	.0734	.0005	.0196	-.0001	4.603	-.0001	.0001	.0003	.0025

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	3.992	4.920	3.584	.1394	-.0009	.6629	.0019	-.0003	-.0002	.0004
Stddev	.014	.024	.032	.0003	.0001	.0076	.0002	.0005	.0004	.0011
%RSD	.3498	.4841	.9003	.1802	11.67	1.144	8.438	165.7	224.0	310.1

#1	3.976	4.898	3.573	.1391	-.0010	.6704	.0017	-.0008	-.0007	.0009
#2	3.999	4.945	3.558	.1395	-.0010	.6553	.0021	.0002	-.0001	-.0009
#3	4.002	4.917	3.620	.1396	-.0008	.6631	.0019	-.0004	.0002	.0011

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	1.926	-.0002	.0176	.0015	-.0014	.0006	.0070
Stddev	.002	.0001	.0000	.0001	.0007	.0001	.0000
%RSD	.1223	60.29	.2654	8.449	47.28	12.86	.6019

#1	1.923	-.0003	.0176	.0016	-.0007	.0005	.0070
#2	1.928	-.0003	.0177	.0015	-.0015	.0006	.0070
#3	1.926	-.0001	.0176	.0014	-.0020	.0007	.0069

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2678.1	5990.7	46562.	5867.0
Stddev	2.1	6.8	93.	34.3
%RSD	.07757	.11357	.20073	.58483

#1	2678.0	5982.9	46616.	5885.6
#2	2680.2	5995.1	46455.	5888.1
#3	2676.0	5994.2	46617.	5827.5

Raw Data MA13933 page 99 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: FA42384-2 Acquired: 3/28/2017 14:07:26 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 2.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	.0000	.0004	-.0028	.1048	-.0003	97.08	-.0001	-.0005	.0008	.0008
Stddev	.0000	.0071	.0009	.0006	.0001	.22	.0001	.0000	.0001	.0007
%RSD	958.6	1956.	32.63	.5335	28.53	.2298	55.42	3.819	16.10	86.65

#1	.0000	-.0074	-.0038	.1053	-.0003	97.07	-.0002	-.0005	.0007	.0000
#2	.0000	.0019	-.0020	.1042	-.0002	96.87	-.0001	-.0005	.0009	.0012
#3	.0000	.0066	-.0025	.1050	-.0003	97.32	.0000	-.0005	.0007	.0014

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	.1339	4.440	13.20	.0387	-.0028	78.98	-.0002	.0047	-.0015	.0046
Stddev	.0023	.047	.05	.0003	.0001	.22	.0002	.0014	.0013	.0029
%RSD	1.694	1.067	.3497	.8095	3.516	.2731	96.92	30.38	90.05	62.50

#1	.1329	4.493	13.15	.0384	-.0029	79.10	-.0004	.0058	-.0023	.0070
#2	.1323	4.426	13.20	.0385	-.0029	78.73	-.0002	.0031	-.0021	.0014
#3	.1365	4.401	13.24	.0390	-.0027	79.11	.0000	.0053	.0001	.0054

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	12.75	-.0005	.3772	.0033	-.0012	.0000	.0027
Stddev	.02	.0003	.0006	.0008	.0005	.001	.0002
%RSD	.1813	70.40	.1545	24.05	39.68	161.0	6.121

#1	12.78	-.0002	.3774	.0041	-.0012	-.0006	.0025
#2	12.74	-.0008	.3766	.0033	-.0007	.0001	.0027
#3	12.74	-.0004	.3777	.0025	-.0017	.0004	.0028

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2511.0	5822.1	44793.	5867.9
Stddev				

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Sample Name: FA42384-3 Acquired: 3/28/2017 14:11:39 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	-0001	-0616	-0009	-0146	-0001	31.59	-0001	-0003	-0008	-0008
Stddev	.0002	.0027	.0003	.0003	.0000	.10	.0000	.0001	.0003	.0001
%RSD	116.5	4.326	39.88	2.016	19.83	.3072	41.20	43.49	35.73	6.719

#1	-0003	.0598	-0012	.0149	-0001	31.49	-0001	-0004	.0009	.0008
#2	.0000	.0603	-0005	.0145	-0001	31.68	-0002	-0002	.0005	.0008
#3	-0001	.0647	-0008	.0144	-0001	31.60	-0001	-0002	.0011	.0009

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	.2896	7.114	3.658	.0343	-.0010	-.8715	-.0006	-.0009	-.0005	-.0013
Stddev	.0015	.031	.045	.0001	.0001	.0093	.0001	.0003	.0008	.0017
%RSD	.5185	.4344	1.238	.3308	11.16	1.065	25.33	30.46	181.2	131.6

#1	.2880	7.132	3.615	.0342	-.0009	.8611	.0007	.0010	-.0002	.0001
#2	.2910	7.132	3.655	.0342	-.0011	.8790	.0006	.0006	-.0002	.0032
#3	.2898	7.078	3.705	.0344	-.0011	.8743	.0004	.0012	-.0014	.0005

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	1.116	-.0002	.0823	.0020	-.0008	-.0011	-.0007
Stddev	.004	.0003	.0004	.0002	.0012	.0001	.0000
%RSD	.3271	174.8	.4875	7.609	148.7	6.518	6.128

#1	1.113	-.0004	.0823	.0018	-.0002	.0011	.0007
#2	1.114	-.0001	.0828	.0020	-.0022	.0012	.0007
#3	1.120	-.0001	.0820	.0021	-.0001	.0011	.0008

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2625.4	5955.3	45400.	5853.4
Stddev	1.4	5.2	136.	75.2
%RSD	.05321	.08785	.29972	1.2842

#1	2624.1	5961.3	45371.	5933.2
#2	2625.2	5952.7	45548.	5843.0
#3	2626.9	5951.8	45280.	5783.9

Raw Data MA13933 page 101 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: FA42384-4 Acquired: 3/28/2017 14:15:53 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)	(Y_3600)
Avg	-.0002	-.1721	-.0013	-.0168	-.0001	19.81	-0001	-0001	-0002	.0015
Stddev	.0004	.0073	.0003	.0002	.0001	.08	.0000	.0000	.0002	.0001
%RSD	176.6	4.263	26.94	1.211	88.15	.4065	58.05	43.09	77.29	8.674

#1	-.0002	.1712	-.0010	.0166	-.0001	19.72	.0000	-0001	.0001	.0016
#2	.0002	.1799	-.0012	.0170	-.0001	19.88	-0001	-0001	.0002	.0015
#3	.0007	.1653	-.0017	.0169	.0000	19.83	-0001	-0001	.0004	.0014

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	.2903	5.757	2.365	-.0118	-.0011	2.340	-.0006	.0010	-.0001	.0017
Stddev	.0018	.030	.031	.0001	.0002	.018	.0000	.0003	.0006	.0005
%RSD	.6102	.5194	1.322	.5252	14.85	.7845	6.766	34.54	442.0	31.49

#1	.2887	5.732	2.333	.0118	-.0010	2.331	.0006	.0013	.0003	.0023
#2	.2901	5.750	2.396	.0119	-.0013	2.362	.0006	.0009	.0001	.0014
#3	.2922	5.790	2.365	.0117	-.0010	2.329	.0006	.0007	-.0008	.0014

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	1.387	-.0003	.0521	-.0012	.0000	.0008	.0034
Stddev	.006	.0001	.0002	.0000	.0007	.0002	.0000
%RSD	.4053	53.27	.3112	1.749	605.9	31.82	1.043

#1	1.383	-.0004	.0522	.0012	-.0003	.0009	.0034
#2	1.393	-.0002	.0519	.0012	-.0008	.0009	.0034
#3	1.384	-.0002	.0522	.0012	-.0004	.0005	.0035

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2629.7	5940.5	45680.	5828.7
Stddev	8.4	24.2	188.	87.1
%RSD	.31774	.40696	.41180	1.4938

#1	2627.8	5939.6	45464.	5918.3
#2	2622.4	5916.8	45809.	5744.4
#3	2638.8	5965.1	45767.	5823.5

Raw Data MA13933 page 102 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: FA42384-5 Acquired: 3/28/2017 14:20:05 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	.0002	.0391	-.0015	.0177	-.0002	72.55	-.0002	-.0002	.0003	.0007
Stddev	.0002	.0117	.0004	.0000	.0000	.11	.0000	.0001	.0002	.0003
%RSD	124.3	30.06	28.50	.2457	25.10	.1509	9.374	34.35	63.79	36.43

#1	.0004	.0510	-.0019	.0178	-.0002	72.64	-.0001	-.0002	.0002	.0007
#2	.0001	.0386	-.0011	.0177	-.0001	72.58	-.0002	-.0003	.0006	.0010
#3	.0000	.0276	-.0014	.0177	-.0002	72.43	-.0002	-.0001	.0002	.0005

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	.1558	3.014	7.593	.0296	-.0011	14.47	.0002	.0033	-.0007	.0021
Stddev	.0013	.023	.038	.0000	.0001	.01	.0002	.0001	.0004	.0001
%RSD	.8368	.7720	.5019	.1656	7.151	.0710	76.54	4.071	53.26	4.205

#1	.1544	3.001	7.622	.0296	-.0010	14.48	.0003	.0031	-.0007	.0021
#2	.1560	3.001	7.607	.0297	-.0011	14.47	.0000	.0034	-.0010	.0021
#3	.1570	3.041	7.550	.0296	-.0011	14.46	.0003	.0033	-.0003	.0020

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	10.39	-.0003	.2459	-.0025	-.0016	.0008	.0024
Stddev	.03	.0002	.0006	.0001	.0005	.0001	.0001
%RSD	.3193	64.56	.2432	5.167	28.77	13.32	2.378

#1	10.37	-.0002	.2463	.0026	-.0016	.0007	.0024
#2	10.37	-.0001	.2461	.0024	-.0012	.0009	.0023
#3	10.42	-.0004	.2452	.0024	-.0021	.0007	.0024

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2534.3	5884.4	45261.	5810.9
Stddev	7.9	18.0	160.	27.9
%RSD	.31148	.30650	.35271	.48086

#1	2543.3	5902.3	45352.	5779.1
#2	2528.3	5884.5	45076.	5831.5
#3	2531.4	5866.2	45353.	5822.1

Raw Data MA13933 page 103 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: FA42384-6 Acquired: 3/28/2017 14:28:16 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)	(Y_3600)
Avg	.0000	.0779	-.0015	.0283	-.0001	57.67	-.0001	-.0002	.0011	.0004
Stddev	.0003	.0027	.0007	.0001	.0000	.15	.0001	.0000	.0001	.0002
%RSD	656.8	3.484	43.67	.4585	16.13	.2508	41.59	14.34	7.359	51.53

#1	.0003	.0752	-.0008	.0282	-.0001	57.72	-.0001	-.0002	.0012	.0002
#2	.0000	.0806	-.0021	.0284	-.0001	57.89	-.0001	-.0002	.0011	.0006
#3	-.0002	.0778	-.0016	.0283	-.0002	58.01	-.0002	-.0002	.0011	.0003

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	2.036	7.838	6.733	.0447	-.0013	12.53	.0003	.0019	-.0014	.0011
Stddev	.017	.033	.046	.0000	.0002	.02	.0001	.0006	.0001	.0018
%RSD	.8380	.4254	.6879	.0420	11.72	.1811	25.08	33.66	8.510	159.1

#1	2.016	7.805	6.690	.0447	-.0015	12.51	.0002	.0019	-.0013	-.0009
#2	2.044	7.872	6.725	.0447	-.0012	12.52	.0003	.0026	-.0015	.0018
#3	2.047	7.837	6.782	.0446	-.0012	12.55	.0002	.0013	-.0015	.0025

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	8.659	-.0002	.1981	.0020	-.0011	.0010	.0017
Stddev	.017	.0002	.0008	.0001	.0006	.0003	.0000
%RSD	.1947	112.7	.4059	2.615	51.32	27.35	2.723

#1	8.657	-.0003	.1972	.0020	-.0018	.0013	.0017
#2	8.644	-.0000	.1983	.0020	-.0008	.0007	.0017
#3	8.677	-.0001	.1987	.0019	-.0008	.0010	.0018

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2544.3	5863.3	45192.	5832.2
Std				





Sample Name: CCB Acquired: 3/28/2017 14:45:26 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2762.7	6083.7	46694.	5889.3
Stddev	6.7	11.4	211.	8.9
%RSD	.24113	.18659	.45145	.15045

#1	2769.1	6095.2	46810.	5889.8
#2	2755.8	6072.5	46821.	5880.2
#3	2763.3	6083.6	46451.	5897.9

Raw Data MA13933 page 109 of 198

Sample Name: FA42117-6FA Acquired: 3/28/2017 14:49:42 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	.0000	.0163	-.0008	.0040	-.0001	3.545	.0001	.0011	.0001	.0018
Stddev	.0000	.0073	.0002	.0002	.0000	.018	.0000	.0001	.0003	.0002
%RSD	783.0	44.69	27.94	4.155	46.81	.5149	28.90	5.937	298.7	9.942

#1	.0000	.0079	-.0011	.0040	-.0001	3.539	.0001	.0011	.0005	.0016
#2	-.0004	.0203	-.0006	.0038	-.0002	3.565	.0001	.0012	.0000	.0019
#3	.0003	.0206	-.0007	.0041	-.0001	3.531	.0001	.0010	-.0001	.0020

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	.0231	.6312	.3448	.0351	-.0004	1.791	.0009	.0008	-.0009	.0012
Stddev	.0021	.0036	.0081	.0001	.0001	.016	.0000	.0002	.0005	.0004
%RSD	9.145	.5764	2.363	.1655	30.55	.8809	5.511	30.38	60.36	34.29

#1	.0248	.6303	.3354	.0351	-.0004	1.793	.0009	.0007	-.0012	.0009
#2	.0237	.6281	.3501	.0352	-.0003	1.805	.0010	.0010	-.0003	.0010
#3	.0207	.6352	.3488	.0351	-.0006	1.774	.0009	.0006	-.0012	.0016

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	4.238	-.0002	.0265	.0005	-.0011	.0000	.0050
Stddev	.006	.0002	.0000	.0000	.0009	.0002	.0001
%RSD	.1424	112.1	.1856	10.07	82.19	4251.	1.646

#1	4.232	.0000	.0265	.0005	-.0003	.0000	.0049
#2	4.238	-.0003	.0265	.0005	-.0021	-.0002	.0049
#3	4.244	-.0003	.0266	.0004	-.0010	.0002	.0050

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2718.8	6033.6	46699.	5897.9
Stddev	8.5	12.5	225.	24.5
%RSD	.31438	.20756	.48088	.41622

#1	2724.3	6040.8	46862.	5869.7
#2	2723.2	6040.8	46443.	5909.8
#3	2709.0	6019.1	46791.	5914.2

Raw Data MA13933 page 110 of 198

Sample Name: MP31871-D1 Acquired: 3/28/2017 14:53:54 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)	(Y_3600)
Avg	.0019	114.1	.0539	1.070	.0060	190.7	.0033	.0368	.1044	.1891
Stddev	.0002	.3	.0006	.005	.0000	3.2	.0000	.0001	.0005	.0004
%RSD	10.14	.2801	1.187	.4798	.8177	1.670	.4949	.3911	.4897	.2254

#1	.0021	113.8	.0544	1.064	.0059	192.4	.0033	.0370	.1043	.1891
#2	.0018	114.4	.0541	1.073	.0060	192.7	.0033	.0367	.1039	.1887
#3	.0017	114.1	.0532	1.073	.0060	187.0	.0033	.0369	.1049	.1896

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	121.8	29.98	39.35	1.708	.0026	.5993	.0922	.2380	.0000	.0055
Stddev	.3	.07	.15	.004	.0000	.0023	.0002	.0012	.0020	.0004
%RSD	.2537	.2484	.3751	.2619	1.549	.3821	.2635	.5137	209000.	8.148

#1	121.7	29.90	39.37	1.713	.0026	.6015	.0921	.2392	-.0023	.0052
#2	122.2	30.05	39.48	1.707	.0026	.5969	.0921	.2368	.0012	.0060
#3	121.6	29.98	39.19	1.705	.0026	.5994	.0925	.2379	.0012	.0052

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	1.389	.0207	.7238	1.490	-.0016	.2088	.3924
Stddev	.000	.0003	.0023	.002	.0014	.0003	.0013
%RSD	.0186	1.237	.3240	.1124	87.90	.1575	.3427

#1	1.389	.0210	.7211	1.490	-.0000	.2090	.3936
#2	1.388	.0206	.7251	1.488	-.0023	.2085	.3909
#3	1.389	.0205	.7251	1.491	-.0024	.2090	.3927

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2333.6	7067.4	53486.	7088.6
Stddev	3.7	4.8	151.	53.4
%RSD	.15933	.06835	.28314	.75324

#1	2329.3	7062.7	53342.	7068.8
#2	2336.3	7067.3	53644.	7048.0
#3	2335.1	7072.3	53471.	7149.1

Raw Data MA13933 page 111 of 198

Sample Name: FA42117-7FA Acquired: 3/28/2017 14:58:06 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	-.0001	.0166	-.0012	.0057	-.0001	7.915	.0000	-.0002	-.0001	.0008
Stddev	.0001	.0038	.0005	.0000	.0000	.020	.000	.0000	.0002	.0004
%RSD	196.0	22.80	41.56	.5885	48.33	.2526	110.7	12.17	263.9	48.11

#1	-.0001	.0123	-.0018	.0057	-.0000	7.900	.0000	-.0002	.0001	.0012
#2	-.0001	.0194	-.0008	.0056	-.0001	7.908	-.0001	-.0002	-.0003	.0004
#3	-.0001	.0182	-.0011	.0057	-.0001	7.938	-.0001	-.0002	.0000	.0008

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	.0219	.5580	.6302	.0067	-.0009	2.764	.0004	.0008	-.0009	.0006
Stddev	.0089	.0119	.0098	.0001	.0001	.009	.0001	.0003	.0008	.0006
%RSD	40.65	2.137	1.551	.8851	13.09	.3251	21.93	41.48	85.08	95.10

#1	.0312	.5445	.6372	.0067	-.0008	2.755	.0003	.0007	-.0008	.0007
#2	.0211	.5625	.6344	.0067	-.0011	2.764	.0005	.0005	-.0002	.0012
#3	.0134	.5670	.6191	.0066	-.0009	2.773	.0004	.0011	-.0018	.0000

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	3.805	-.0002	.0411	.0007	-.0011	.0001	.0025
Stddev	.006	.0004	.0001	.0001	.0005	.0001	.0000
%RSD	.1556	160.1	.3086	9.420	41.17	158.6	.9983

#1	3.809	.0002	.0409	.0007	-.0016	.0002	.0025
#2	3.798	-.0003	.0411	.0008	-.0011	.0000	.0025
#3	3.808	-.0006	.0412	.0007	-.0007	.0000	.0025

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2694.6	6038.5	45960.	5861.8
Stddev	9.6	6.8	280.	52.0
%RSD	.35624	.11213	.60964	.88681

#1	2688.3	6032.9	46087.	5805.2
#2	2689.8	6036.6	45639.	5872.5
#3	2705.6	6046.1	46154.	5907.5

Raw Data MA13933 page 112 of 198

[Zoom In](#)  
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Sample Name: FA42117-8FA Acquired: 3/28/2017 15:02:20 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	-0.002	.0023	-0.011	-0.065	-0.001	3.796	-0.001	-0.002	.0001	-0.007
Stddev	.0001	.0059	.0005	.0004	.0002	.011	.0001	.0000	.0001	.0003
%RSD	73.38	254.0	47.27	5.490	213.4	.2829	91.24	21.27	197.9	46.95
#1	-0.001	-0.007	-0.008	.0066	-0.002	3.792	.0000	-0.002	-0.001	-0.007
#2	-0.001	-0.014	-0.018	.0061	-0.002	3.808	-0.001	-0.003	.0001	-0.003
#3	-0.003	.0091	-0.008	.0067	-0.001	3.788	-0.000	-0.002	.0002	.0010
Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	-0.031	.9658	.2954	.0038	-0.010	1.691	.0006	.0005	-0.009	.0016
Stddev	.0021	.0130	.0204	.0001	.0001	.004	.0001	.0001	.0003	.0017
%RSD	69.15	1.347	6.899	1.713	8.413	.2672	21.55	11.89	32.39	102.4
#1	-0.006	.9802	.2820	.0038	-0.010	1.693	.0008	.0006	-0.006	.0022
#2	-0.046	.9549	.3189	.0039	-0.011	1.694	.0005	.0005	-0.011	-0.003
#3	-0.041	.9622	.2853	.0037	-0.009	1.686	.0005	.0004	-0.011	.0029
Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062			
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)			
Avg	4.385	-0.003	.0459	.0001	-0.006	.0001	.0035			
Stddev	.017	.0001	.0002	.0000	.0005	.0001	.0000			
%RSD	.3922	39.54	.4913	32.10	87.13	175.2	1.190			
#1	4.405	-0.002	.0458	.0002	-0.009	.0000	.0035			
#2	4.376	-0.002	.0461	.0001	-0.008	.0000	.0035			
#3	4.374	-0.004	.0457	.0002	-0.000	.0002	.0035			
Int. Std.	In2306	Y_2243	Y_3600	Y_3710						
Avg	2690.4	5982.6	45919.	5908.6						
Stddev	1.6	10.2	174.	59.8						
%RSD	.05930	.17097	.37811	1.0119						
#1	2690.8	5989.5	45735.	5856.4						
#2	2688.6	5987.5	45942.	5895.6						
#3	2691.8	5970.9	46080.	5973.9						

Raw Data MA13933 page 113 of 198

[Zoom In](#)  
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Sample Name: FA42117-9FA Acquired: 3/28/2017 15:06:32 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	-0.003	-0.037	-0.011	-0.110	-0.001	4.205	-0.001	-0.002	-0.001	-0.002
Stddev	.0003	.0135	.0009	.0001	.0000	.003	.0000	.0001	.0000	.0004
%RSD	100.6	366.2	78.65	.9433	54.05	.0590	29.90	30.36	30.97	181.1
#1	-0.006	-0.110	-0.018	.0111	-0.001	4.205	-0.001	-0.002	-0.001	.0006
#2	-0.004	.0157	-0.001	.0109	-0.001	4.208	-0.001	-0.002	-0.001	-0.002
#3	.0000	.0064	-0.013	.0109	-0.001	4.203	-0.001	-0.001	-0.001	.0003
Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	.0016	.6009	.2961	.0018	-0.009	1.705	-0.001	.0009	-0.001	.0015
Stddev	.0022	.0227	.0096	.0000	.0000	.016	.0001	.0004	.0006	.0010
%RSD	140.9	3.772	3.239	2697	2.143	.9169	95.55	49.53	997.4	68.76
#1	-0.009	.5905	.3024	.0018	-0.009	1.722	-0.002	.0014	.0001	.0011
#2	.0035	.6269	.3008	.0018	-0.009	1.692	.0000	.0006	.0004	.0027
#3	.0021	.5853	.2850	.0018	-0.009	1.701	-0.001	.0006	-0.007	.0008
Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062			
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)			
Avg	3.759	-0.002	.0340	.0000	-0.008	-0.001	.0011			
Stddev	.006	.0002	.0003	.0001	.0003	.0002	.0001			
%RSD	.1667	96.68	.8727	188.6	31.91	187.2	6.103			
#1	3.764	-0.004	.0343	.0001	-0.011	.0001	.0011			
#2	3.752	.0000	.0337	.0000	-0.006	-0.001	.0010			
#3	3.761	-0.001	.0340	.0000	-0.007	-0.003	.0012			
Int. Std.	In2306	Y_2243	Y_3600	Y_3710						
Avg	2713.4	5998.4	46403.	5891.8						
Stddev	7.5	12.3	207.	43.6						
%RSD	.27725	.20534	.44533	.74032						
#1	2710.3	5987.4	46599.	5902.9						
#2	2721.9	6011.7	46424.	5843.7						
#3	2707.9	5996.1	46187.	5928.7						

Raw Data MA13933 page 114 of 198

[Zoom In](#)  
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Sample Name: FA42117-10FA Acquired: 3/28/2017 15:10:45 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	-0.001	.0067	-0.013	.0103	-0.001	4.048	-0.001	-0.001	.0001	.0002
Stddev	.0002	.0045	.0006	.0002	.0000	.012	.0000	.0000	.0001	.0004
%RSD	169.1	66.78	47.41	1.471	27.65	.3029	32.84	14.82	172.5	158.3
#1	-0.003	.0102	-0.006	.0101	.0000	4.050	-0.001	-0.001	.0001	.0001
#2	-0.001	.0017	-0.016	.0104	-0.001	4.034	-0.001	-0.001	-0.001	.0001
#3	-0.002	.0082	-0.017	.0102	-0.001	4.058	-0.001	-0.001	.0001	.0007
Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	-0.024	.6209	.2806	.0020	-0.011	1.665	.0003	.0009	-0.006	.0022
Stddev	.0020	.0264	.0051	.0000	.0002	.006	.0002	.0002	.0012	.0008
%RSD	83.95	4.253	1.808	1.477	18.26	.3468	58.65	19.63	202.5	38.92
#1	-0.023	.6346	.2749	.0021	-0.012	1.668	.0001	.0010	.0006	.0030
#2	-0.005	.5904	.2847	.0020	-0.008	1.659	.0005	.0007	-0.006	.0021
#3	-0.045	.6376	.2820	.0020	-0.012	1.669	.0004	.0009	-0.017	.0014
Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062			
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)			
Avg	3.649	-0.003	.0325	.0001	-0.013	.0001	.0022			
Stddev	.011	.0001	.0002	.0001	.0008	.0001	.0000			
%RSD	.3130	32.16	.6315	145.0	66.27	61.35	1.943			
#1	3.657	-0.002	.0323	.0000	-0.010	.0002	.0022			
#2	3.653	-0.004	.0324	.0002	-0.006	.0000	.0021			
#3	3.636	-0.003	.0327	.0000	-0.022	.0001	.0022			
Int. Std.	In2306	Y_2243	Y_3600	Y_3710						
Avg	2710.8	6019.6	46264.	5954.7						
Stddev	5.6	25.6	106.	53.0						
%RSD	.20800	.42529	.22846	.88926						
#1	2708.9	6004.8	46326.	5914.9						
#2	2706.2	6004.8	46323.	6014.8						
#3	2717.1	6049.1	46142.	5934.4						

Raw Data MA13933 page 115 of 198

[Zoom In](#)  
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Sample Name: FA42117-12FA Acquired: 3/28/2017 15:14:58 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	-0.002	-0.011	-0.017	.0001	-0.001	.0447	-0.001	-0.001	.0001	.0028
Stddev	.0003	.0001	.0008	.0001	.0000	.0028	.0000	.0000	.0002	.0003
%RSD	153.1	4.862	50.63	236.2	25.01	6.326	42.19	32.88	155.5	10.61
#1	.0002	-0.011	-0.014	-0.001	-0.001	.0438	-0.001	-0.002	.0003	.0027
#2	-0.004	-0.010	-0.026	.0002	-0.001	.0478	-0.001	-0.001	.0001	.0026
#3	-0.003	-0.011	-0.010	.0001	-0.001	.0424	-0.001	-0.002	.0000	.0031
Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	-0.059	.0176	.0182	.0005	-0.011	.2576	-0.003	.0002	-0.006	.0010
Stddev	.0011	.0201	.0214	.0000	.0001	.0053	.0001	.0006	.0012	.0019
%RSD	17.98	113.9	117.8	3.764	7.429	2.074	55.99	261.7	180.7	185.0
#1	-0.062	.0397	.0186	.0005	-0.010	.2586	-0.001	-0.003	.0006	.0015
#2	-0.047	.0003	-0.034	.0005	-0.011	.2518	-0.003	.0001	-0.017	-0.011
#3	-0.068	.0130	.0394	.0005	-0.011	.2624	-0.004	.0009	-0.009	.0027
Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062			
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)			
Avg	.0186	.0002	.0001	-0.0004	-0.0021	-0.001	.0003			
Stddev	.0010	.0000	.0001	.0001	.0014	.0000	.0001			
%RSD	5.621	26.42	72.13	17.74	67.71	33.13	20.69			
#1	.0193	.0002	.0001	-0.0003	-0.013	-0.001	.0003			
#2	.0192	.0001	.0001	-0.0005	-0.012	-0.001	.0002			
#3	.0174	.0002	.0000	-0.0003	-0.037	-0.002	.0003			
Int. Std.	In2306	Y_2243	Y_3600	Y_3710						
Avg	2696.7	5956.3	46079.	5870.3						
Stddev	9.4	18.2	155.	54.4						
%RSD	.34736	.30526	.33729	.92698						
#1	2687.6	5937.8	46095.	5911.6						
#2	2696.1	5956.8	46226.	5890.6						
#3	2706.3	5974.2	45916.	5808.6						



Sample Name: MP31869-MB2A Acquired: 3/28/2017 15:19:13 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.002	-0.003	-0.009	-0.001	-0.001	.0135	-0.001	-0.002	.0000	.0006
Stddev	.0001	.0052	.0006	.0000	.0000	.0012	.0000	.0000	.000	.0001
%RSD	59.73	1851.	69.52	15.00	24.47	8.986	40.86	18.65	910.8	24.19
#1	-0.001	-0.029	-0.007	-0.001	-0.001	.0148	-0.001	-0.003	-0.002	.0007
#2	-0.003	-0.037	-0.004	-0.001	-0.001	.0130	-0.001	-0.002	.0000	.0005
#3	-0.003	.0057	-0.017	-0.001	-0.001	.0126	-0.002	-0.003	.0001	.0006

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.0061	.0424	.0152	.0044	-0.011	.0510	-0.002	.0001	.0003	.0006
Stddev	.0010	.0256	.0080	.0000	.0001	.0038	.0001	.0001	.0006	.0004
%RSD	15.84	60.32	52.69	.9331	11.31	7.407	38.27	238.7	204.6	61.94
#1	-0.051	.0529	.0078	.0045	-0.012	.0544	-0.003	.0002	-0.002	.0002
#2	-0.061	.0133	.0237	.0044	-0.011	.0469	-0.001	-0.001	.0009	.0006
#3	-0.070	.0611	.0140	.0044	-0.010	.0515	-0.002	.0000	.0002	.0009

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0050	-0.002	.0000	-0.003	-0.023	-0.002	.0098
Stddev	.0005	.0000	.0000	.0000	.0010	.0001	.0001
%RSD	10.19	17.05	171.3	11.32	45.04	62.45	.9598
#1	.0056	-0.002	.0000	-0.003	-0.027	-0.003	.0099
#2	.0048	-0.002	.0000	-0.002	-0.011	-0.001	.0097
#3	.0047	-0.002	.0001	-0.003	-0.030	-0.002	.0098

Check ? None Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Raw Data MA13933 page 117 of 198

Sample Name: MP31869-MB3A Acquired: 3/28/2017 15:23:29 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.0005	.0028	-0.013	-0.003	-0.001	.0271	-0.001	-0.002	-0.001
Stddev	.0001	.0019	.0005	.0002	.0000	.0025	.0000	.0001	.0000
%RSD	18.26	68.67	38.24	45.91	35.83	9.211	49.55	63.22	11.36
#1	-0.0005	.0049	-0.019	-0.004	-0.001	.0243	.0000	-0.004	-0.001
#2	-0.0006	.0024	-0.011	-0.002	-0.001	.0291	-0.001	-0.001	-0.001
#3	-0.0004	.0011	-0.010	-0.005	-0.001	.0280	-0.001	-0.002	-0.001

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Elem	Cu3247	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	-0.0058	.0300	.0040	.0001	-0.011	.0979	-0.001	.0003
Stddev	.0003	.0009	.0107	.0045	.0000	.0001	.0032	.0001	.0004
%RSD	129.5	16.17	35.47	113.0	46.83	4.762	3.221	76.87	139.1
#1	.0002	-0.068	.0182	-0.010	.0001	-0.010	.0973	-0.001	.0006
#2	-0.001	-0.050	.0389	.0054	.0001	-0.011	.1013	-0.003	.0005
#3	.0006	-0.055	.0330	.0077	.0001	-0.011	.0951	-0.001	-0.002

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.0004	.0014	.0046	-0.002	.0009	-0.004	-0.016	-0.001	F.0141
Stddev	.0004	.0011	.0004	.0001	.0000	.0001	.0003	.0001	.0001
%RSD	108.9	79.15	8.193	60.87	2.731	14.32	16.07	97.18	.4616
#1	-0.0002	.0001	.0043	-0.001	.0009	-0.005	-0.015	-0.002	.0142
#2	-0.001	.0019	.0050	-0.002	.0009	-0.004	-0.015	-0.001	.0142
#3	-0.0009	.0021	.0046	-0.003	.0009	-0.004	-0.019	.0000	.0141

Check ? Chk Pass Chk Pass None Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Fail  
High Limit .0100  
Low Limit -.0100

Raw Data MA13933 page 119 of 198

Sample Name: MP31869-MB2A Acquired: 3/28/2017 15:19:13 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2725.6	6019.2	46651.	5851.3
Stddev	6.1	13.3	168.	18.2
%RSD	.22349	.22092	.36105	.31157
#1	2720.2	6005.0	46845.	5871.6
#2	2732.2	6031.4	46537.	5846.0
#3	2724.3	6021.1	46572.	5836.3

Raw Data MA13933 page 118 of 198

Sample Name: MP31869-MB3A Acquired: 3/28/2017 15:23:29 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2759.6	6098.7	47111.	5903.1
Stddev	11.4	11.9	180.	41.3
%RSD	.41441	.19590	.38129	.69964
#1	2748.0	6091.9	47175.	5896.0
#2	2759.8	6091.7	46908.	5947.5
#3	2770.9	6112.5	47249.	5865.8

Raw Data MA13933 page 120 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: MP31871-MB1    Acquired: 3/28/2017 15:27:43    Type: QC  
Method: 60102007\_041712(v608)    Mode: CONC    Corr. Factor: 1.000000  
User: admin    SSTRACE02:    Custom ID2:    Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.003	-0.108	-0.013	-0.000	-0.001	-0.035	-0.001	-0.002	-0.004	-0.004
Stddev	.0002	.0046	.0004	.0003	.0001	.0061	.0000	.0000	.0002	.0001
%RSD	49.28	42.85	31.39	887.8	96.72	19.87	4.037	20.47	69.52	20.07
#1	-0.005	.0091	-0.016	-0.002	-0.000	.0340	-0.001	-0.002	.0004	-0.004
#2	-0.003	.0072	-0.016	-0.001	-0.001	.0339	-0.001	-0.002	.0001	-0.004
#3	-0.002	.0160	-0.009	-0.003	-0.001	.0235	-0.001	-0.002	.0006	-0.003

Check ? **Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass**  
High Limit  
Low Limit

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0084	.0256	-0.003	.0002	-0.009	.0387	.0002	.0004	-0.007	.0004
Stddev	.0016	.0147	.0021	.0000	.0001	.0123	.0002	.0002	.0012	.0003
%RSD	19.32	57.58	748.6	6.917	9.632	31.94	88.98	53.35	182.8	72.94
#1	.0099	.0106	.0000	.0002	-0.008	.0475	.0004	.0005	.0006	.0002
#2	.0067	.0260	-0.025	.0002	-0.010	.0439	.0001	.0006	-0.018	.0007
#3	.0087	.0400	.0017	.0002	-0.009	.0246	.0001	.0002	-0.008	.0002

Check ? **Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass**  
High Limit  
Low Limit

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0121	.0221	-0.001	.0002	-0.026	-0.003	.0022
Stddev	.0005	.0002	.0000	.0000	.0008	.0001	.0000
%RSD	3.971	.8442	38.25	27.18	29.82	31.35	1.052
#1	.0121	.0223	-0.001	.0002	-0.034	-0.004	.0023
#2	.0117	.0219	-0.001	.0001	-0.021	-0.002	.0022
#3	.0126	.0220	-0.001	.0002	-0.021	-0.003	.0022

Check ? **None Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass**  
High Limit  
Low Limit

Raw Data MA13933 page 121 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: CCV    Acquired: 3/28/2017 15:32:00    Type: QC  
Method: 60102007\_041712(v608)    Mode: CONC    Corr. Factor: 1.000000  
User: admin    SSTRACE02:    Custom ID2:    Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2521	40.23	2.030	2.070	2.030	40.19	2.051	2.055	2.040	2.022
Stddev	.0012	.07	.007	.006	.004	.04	.004	.005	.001	.002
%RSD	.4742	.1674	.3505	.2764	.1946	.1024	.2022	.2630	.0388	.1184
#1	.2507	40.18	2.022	2.063	2.026	40.16	2.048	2.049	2.039	2.024
#2	.2530	40.31	2.036	2.073	2.034	40.24	2.056	2.060	2.041	2.020
#3	.2525	40.20	2.031	2.073	2.029	40.18	2.051	2.055	2.040	2.024

Check ? **Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass**  
Value  
Range

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	40.07	40.88	39.72	2.063	2.082	40.97	2.057	2.014	2.034	2.035
Stddev	.10	.05	.08	.002	.005	.07	.004	.003	.009	.007
%RSD	.2478	.1268	.1915	.0989	.2411	.1750	.1856	.1484	.4172	.3558
#1	40.02	40.85	39.80	2.065	2.077	40.92	2.053	2.014	2.030	2.031
#2	40.18	40.94	39.72	2.061	2.087	41.05	2.061	2.012	2.044	2.044
#3	40.01	40.85	39.64	2.062	2.083	40.92	2.057	2.018	2.029	2.032

Check ? **Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass**  
Value  
Range

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.053	2.055	2.083	2.062	2.042	2.066	2.045
Stddev	.006	.004	.007	.004	.002	.003	.002
%RSD	.3162	.1962	.3187	.1743	.0765	.1551	.0936
#1	2.048	2.051	2.076	2.058	2.042	2.063	2.043
#2	2.060	2.059	2.089	2.065	2.040	2.065	2.046
#3	2.051	2.055	2.083	2.062	2.043	2.070	2.046

Check ? **None Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass**  
Value  
Range

Raw Data MA13933 page 123 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: MP31871-MB1    Acquired: 3/28/2017 15:27:43    Type: QC  
Method: 60102007\_041712(v608)    Mode: CONC    Corr. Factor: 1.000000  
User: admin    SSTRACE02:    Custom ID2:    Custom ID3:  
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2772.7	6099.5	47275.	5948.4
Stddev	3.8	12.3	213.	82.1
%RSD	.13884	.20132	.45011	1.3798
#1	2776.1	6085.5	47039.	5926.9
#2	2773.4	6108.2	47452.	6039.0
#3	2768.5	6104.8	47333.	5879.2

Raw Data MA13933 page 122 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: CCV    Acquired: 3/28/2017 15:32:00    Type: QC  
Method: 60102007\_041712(v608)    Mode: CONC    Corr. Factor: 1.000000  
User: admin    SSTRACE02:    Custom ID2:    Custom ID3:  
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2351.4	5804.0	43435.	5818.1
Stddev	5.4	13.1	103.	20.2
%RSD	.22876	.22567	.23613	.34730
#1	2353.8	5818.8	43500.	5802.6
#2	2355.3	5799.1	43317.	5810.7
#3	2345.3	5794.0	43488.	5841.0

Raw Data MA13933 page 124 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: CCB Acquired: 3/28/2017 15:35:58 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0063	-0.006	-0.001	.0000	-0.005	.0000	.0001	.0002	.0000
Stddev	.0002	.0018	.0005	.0001	.000	.0008	.0001	.0001	.0003	.000
%RSD	1178.	28.66	76.14	103.8	581.3	145.7	327.6	214.6	130.1	346.0
#1	.0001	.0083	-0.005	-0.003	.0000	.0003	.0001	-0.0001	.0001	.0000
#2	.0002	.0048	-0.002	.0000	.0000	-.0011	.0000	.0001	.0000	-.0001
#3	-.0002	.0057	-.0012	-.0001	.0000	-.0009	-.0001	.0001	.0006	.0001

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0036	.0249	.0147	.0000	.0007	.0182	.0000	.0004	-.0004	.0008
Stddev	.0038	.0088	.0035	.0000	.0004	.0086	.0000	.0006	.0004	.0007
%RSD	105.0	35.44	23.78	80.83	51.46	47.13	96.75	171.1	93.11	97.14
#1	.0080	.0161	.0112	.0001	.0011	.0274	.0001	-.0002	-.0001	.0005
#2	.0015	.0338	.0182	.0000	.0007	.0169	.0000	.0010	-.0009	.0016
#3	.0014	.0249	.0147	.0001	.0003	.0104	.0001	.0002	-.0004	.0002

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Elem	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013	.0000	.0001	.0002	.0000	.0001	.0000
Stddev	.0002	.000	.0000	.0000	.001	.0002	.000
%RSD	12.45	640.9	15.36	21.68	2095.	186.7	109.4
#1	.0012	.0001	.0001	.0002	-.0008	.0003	.0000
#2	.0012	-.0001	.0001	.0002	.0004	.0000	-.0001
#3	.0015	-.0001	.0001	.0001	.0003	.0000	.0000

Check ? None Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Raw Data MA13933 page 125 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: ICV Acquired: 3/28/2017 16:03:10 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2471	41.49	2.005	1.969	1.988	42.71	2.017	2.013	1.983	1.959
Stddev	.0010	.07	.002	.005	.004	.08	.001	.001	.003	.007
%RSD	.4003	.1637	.0984	.2478	.2070	.1854	.0385	.0461	.1504	.3520
#1	.2479	41.56	2.006	1.975	1.992	42.80	2.017	2.013	1.985	1.964
#2	.2474	41.43	2.005	1.966	1.984	42.68	2.017	2.014	1.980	1.963
#3	.2460	41.49	2.003	1.967	1.989	42.65	2.018	2.013	1.984	1.951

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
Value  
Range

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	40.70	41.72	42.43	2.002	2.055	41.66	2.000	1.959	1.990	2.000
Stddev	.07	.06	.03	.002	.001	.07	.000	.005	.006	.001
%RSD	.1733	.1552	.0795	.1096	.0700	.1641	.0144	.2769	.3228	.0661
#1	40.74	41.80	42.45	2.004	2.054	41.73	2.001	1.957	1.989	1.999
#2	40.62	41.69	42.39	2.000	2.055	41.67	2.001	1.955	1.997	2.001
#3	40.75	41.68	42.44	2.001	2.057	41.59	2.000	1.965	1.985	2.001

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
Value  
Range

Elem	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3229	2.026	1.984	2.029	2.038	2.035	1.992
Stddev	.0009	.001	.004	.009	.006	.004	.002
%RSD	.2708	.0444	.1780	.4688	.2788	.1750	.0939
#1	.3227	2.027	1.987	2.040	2.035	2.039	1.992
#2	.3222	2.026	1.980	2.025	2.044	2.032	1.990
#3	.3239	2.026	1.985	2.022	2.034	2.033	1.993

Check ? None Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
Value  
Range

Raw Data MA13933 page 127 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: CCB Acquired: 3/28/2017 15:35:58 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2748.3	6110.5	46179.	5903.6
Stddev	3.5	12.4	49.	65.1
%RSD	.12823	.20375	.10594	1.1030
#1	2751.3	6123.9	46132.	5976.5
#2	2744.4	6099.3	46176.	5851.3
#3	2749.2	6108.2	46230.	5882.8

Raw Data MA13933 page 126 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: ICV Acquired: 3/28/2017 16:03:10 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2333.8	5722.3	43267.	5786.3
Stddev	3.9	.5	131.	28.5
%RSD	.16606	.00853	.30198	.49247
#1	2334.5	5722.0	43122.	5794.8
#2	2337.3	5722.9	43376.	5754.5
#3	2329.6	5722.1	43304.	5809.5

Raw Data MA13933 page 128 of 198

Sample Name: CCV Acquired: 3/28/2017 16:11:49 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2469	39.12	1.983	1.975	1.972	39.37	2.027	2.018	2.001	1.961
Stddev	.0004	.07	.002	.007	.004	.10	.002	.003	.003	.005
%RSD	.1772	.1753	.1232	.3397	.2192	.2631	.0799	.1537	.1350	.2324
#1	2465	39.18	1.980	1.977	1.969	39.43	2.028	2.019	2.001	1.956
#2	2470	39.05	1.983	1.967	1.969	39.26	2.025	2.014	2.004	1.963
#3	2473	39.13	1.985	1.980	1.977	39.44	2.028	2.020	1.999	1.964

Check ? Chk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk Pass  
Value  
Range

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	39.18	39.09	39.01	2.008	2.014	39.53	2.005	1.951	1.975	1.986
Stddev	.05	.05	.12	.005	.001	.16	.002	.000	.004	.001
%RSD	.1261	.1381	.3052	.2636	.0509	.4017	.1099	.0060	.1883	.0400
#1	39.21	39.12	39.11	2.011	2.015	39.67	2.007	1.951	1.979	1.987
#2	39.12	39.02	39.04	2.012	2.015	39.36	2.003	1.952	1.973	1.985
#3	39.21	39.12	38.88	2.002	2.013	39.57	2.006	1.952	1.972	1.986

Check ? Chk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk Pass  
Value  
Range

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.997	2.020	1.985	2.011	1.972	2.009	1.995
Stddev	.002	.000	.005	.004	.004	.004	.001
%RSD	.0878	.0182	.2453	.2133	.1924	.2092	.0723
#1	1.999	2.020	1.981	2.010	1.972	2.007	1.996
#2	1.995	2.020	1.983	2.016	1.969	2.013	1.993
#3	1.997	2.019	1.991	2.007	1.976	2.006	1.994

Check ? None Chk PassChk PassChk PassChk PassChk PassChk PassChk Pass  
Value  
Range

Raw Data MA13933 page 129 of 198

Sample Name: CCB Acquired: 3/28/2017 16:19:58 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.002	-0.019	-0.003	.0003	.0005	.0068	.0001	.0001	.0006	.0006
Stddev	.0003	.0093	.0005	.0002	.0001	.0009	.0000	.0001	.0001	.0002
%RSD	146.6	486.9	179.8	44.11	11.84	13.67	31.63	56.85	11.55	25.90
#1	-0.003	.0087	-0.004	.0004	.0004	.0063	.0002	.0002	.0005	.0007
#2	-0.005	-0.090	-0.007	.0002	.0005	.0063	.0001	.0001	.0005	.0007
#3	.0001	-.0054	.0003	.0004	.0005	.0079	.0002	.0002	.0006	.0004

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0113	-0.010	.0118	.0004	.0006	.0075	.0000	.0002	.0007	.0001
Stddev	.0022	.0157	.0105	.0001	.0002	.0016	.0001	.0005	.0004	.0012
%RSD	19.08	1547.	89.42	21.15	25.59	21.66	240.3	192.8	57.99	2428.
#1	.0093	.0131	.0018	.0005	.0007	.0089	.0000	-.0001	.0009	-.0003
#2	.0112	-.0179	.0107	.0003	.0007	.0057	.0000	.0008	.0010	-.0014
#3	.0136	.0018	.0227	.0003	.0004	.0079	.0001	.0001	.0002	-.0010

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	.0004	.0004	.0006	.0000	.0004	.0001
Stddev	.0003	.0001	.0000	.0001	.001	.0001	.0000
%RSD	54.80	29.72	5.322	19.33	2685.	22.02	17.44
#1	.0009	.0004	.0004	.0005	.0011	.0003	.0002
#2	.0007	.0002	.0004	.0007	-.0012	.0005	.0002
#3	.0002	.0004	.0004	.0005	.0000	.0004	.0001

Check ? None Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Raw Data MA13933 page 131 of 198

Sample Name: CCV Acquired: 3/28/2017 16:11:49 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2345.8	5744.1	43269.	5807.4
Stddev	5.0	5.9	191.	25.6
%RSD	.21325	.10200	.44116	.44156
#1	2350.1	5750.8	43181.	5811.3
#2	2347.0	5741.7	43138.	5780.1
#3	2340.3	5739.9	43488.	5830.9

Raw Data MA13933 page 130 of 198

Sample Name: CCB Acquired: 3/28/2017 16:19:58 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2701.0	5986.3	45649.	5803.0
Stddev	4.0	2.5	178.	31.1
%RSD	.14670	.04182	.39073	.53593
#1	2700.1	5985.0	45754.	5838.3
#2	2705.3	5989.2	45750.	5779.7
#3	2697.6	5984.7	45443.	5791.1

Sample Name: MP31871-B1 Acquired: 3/28/2017 16:24:21 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0457	26.76	1.975	2.020	.0512	25.18	.0498	.4969	.1980	.2507
Stddev	.0003	.12	.005	.006	.0002	.07	.0002	.0015	.0005	.0005
%RSD	.6939	.4383	.2429	.3144	.2983	.2964	.3658	.2988	.2644	.1804
#1	.0455	26.64	1.972	2.013	.0513	25.09	.0497	.4957	.1975	.2503
#2	.0455	26.88	1.973	2.023	.0512	25.23	.0498	.4963	.1980	.2512
#3	.0461	26.76	1.981	2.025	.0510	25.22	.0500	.4986	.1986	.2505

Check ? Chk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk Pass  
Value  
Range

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.99	25.09	24.50	.5021	.5602	25.01	.5029	.4762	.4948	1.952
Stddev	.01	.04	.09	.0014	.0013	.08	.0010	.0007	.0020	.008
%RSD	.0327	.1757	.3796	.2846	.2254	.3010	.2073	.1427	.4037	.3929
#1	25.99	25.10	24.42	.5005	.5592	24.94	.5022	.4767	.4927	1.947
#2	25.98	25.05	24.60	.5025	.5598	25.09	.5023	.4765	.4951	1.948
#3	26.00	25.13	24.47	.5033	.5616	25.01	.5041	.4755	.4966	1.961

Check ? Chk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk Pass  
Value  
Range

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0134	.5637	.5430	.5373	1.948	.4875	.4943
Stddev	.0003	.0014	.0004	.0005	.005	.0007	.0012
%RSD	2.127	.2457	.0740	.0991	.2456	.1361	.2336
#1	.0131	.5622	.5434	.5367	1.948	.4873	.4929
#2	.0134	.5640	.5429	.5377	1.943	.4882	.4950
#3	.0137	.5649	.5426	.5375	1.953	.4870	.4948

Check ? None Chk Pass None None Chk PassChk PassChk Pass  
Value  
Range

Raw Data MA13933 page 133 of 198

Sample Name: FA42067-5 Acquired: 3/28/2017 16:28:19 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	.0017	107.2	.0546	.9446	.0060	204.6	.0030	.0344	.1008	.1788
Stddev	.0001	.1	.0002	.0010	.0001	2.0	.0000	.0000	.0001	.0003
%RSD	6.401	.1392	.4168	.1016	1.445	.9850	.4371	.1171	.1278	.1801
#1	.0017	107.4	.0543	.9457	.0061	205.9	.0030	.0344	.1006	.1788
#2	.0018	107.2	.0547	.9444	.0059	202.3	.0030	.0344	.1008	.1791
#3	.0016	107.1	.0547	.9438	.0059	205.7	.0030	.0344	.1008	.1784

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	119.0	28.13	38.31	1.643	.0038	.5410	.0868	.2323	.0016	.0044
Stddev	.3	.04	.14	.003	.0001	.0048	.0003	.0019	.0007	.0006
%RSD	.2160	.1525	.3725	.1826	2.786	.8911	.3743	.8286	44.19	13.38
#1	119.3	28.18	38.44	1.643	.0037	.5393	.0870	.2321	.0016	.0041
#2	118.8	28.11	38.16	1.647	.0038	.5464	.0864	.2305	.0024	.0051
#3	118.9	28.10	38.32	1.641	.0038	.5373	.0870	.2343	.0009	.0042

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	1.484	.0205	.7445	1.415	-.0022	.2030	.3734
Stddev	.003	.0002	.0011	.001	.0010	.0007	.0005
%RSD	.1705	.7785	.1507	.0585	44.29	.3248	.1422
#1	1.486	.0206	.7457	1.414	-.0014	.2034	.3733
#2	1.481	.0203	.7445	1.415	-.0032	.2033	.3729
#3	1.486	.0204	.7434	1.415	-.0018	.2022	.3740

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2362.5	7114.3	53071.	7121.4
Stddev	6.6	16.1	160.	39.9
%RSD	.28035	.22699	.30209	.56058
#1	2361.9	7112.4	53160.	7078.9
#2	2369.3	7131.3	52886.	7158.1
#3	2356.1	7099.1	53167.	7127.3

Raw Data MA13933 page 135 of 198

Sample Name: MP31871-B1 Acquired: 3/28/2017 16:24:21 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2502.3	5957.2	45483.	5994.7
Stddev	2.4	4.4	137.	12.8
%RSD	.09596	.07385	.30075	.21386
#1	2500.7	5957.8	45606.	6006.5
#2	2501.1	5952.6	45507.	5996.5
#3	2505.0	5961.3	45336.	5981.1

Raw Data MA13933 page 134 of 198

Sample Name: MP31871-SD1 Acquired: 3/28/2017 16:32:32 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 5.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	.0026	121.9	.0647	1.071	.0071	240.7	.0036	.0422	.1194	.2062
Stddev	.0014	.2	.0014	.002	.0001	.5	.0003	.0004	.0012	.0008
%RSD	51.61	.1692	2.151	.1642	1.957	.2219	7.097	1.010	1.022	.4009
#1	.0024	121.8	.0631	1.069	.0073	240.1	.0036	.0420	.1180	.2072
#2	.0014	122.2	.0653	1.073	.0071	240.8	.0034	.0419	.1197	.2057
#3	.0041	121.9	.0657	1.071	.0070	241.1	.0039	.0427	.1204	.2058

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	140.4	31.91	45.18	1.929	.0028	.7799	.1047	.2355	.0059	.0122
Stddev	.4	.20	.22	.002	.0003	.0413	.0007	.0040	.0039	.0039
%RSD	.2730	.6204	.4855	.0853	9.452	5.294	.7060	1.716	66.46	31.84
#1	140.0	31.77	44.94	1.927	.0030	.7326	.1051	.2398	.0065	.0082
#2	140.4	31.83	45.22	1.931	.0029	.8087	.1051	.2350	.0095	.0123
#3	140.8	32.14	45.37	1.929	.0025	.7983	.1038	.2318	.0017	.0160

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	1.736	.0251	.8484	1.618	.0022	.2336	.4601
Stddev	.004	.0008	.0031	.005	.0041	.0021	.0004
%RSD	.2446	3.229	.3649	.3371	186.0	.9020	.0845
#1	1.732	.0246	.8454	1.612	.0026	.2319	.4598
#2	1.735	.0260	.8482	1.618	.0062	.2328	.4605
#3	1.740	.0247	.8516	1.623	-.0021	.2359	.4598

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2529.6	6182.9	46962.	6111.2
Stddev	2.9	3.0	192.	31.0
%RSD	.11517	.04801	.40860	.50806
#1	2527.2	6184.0	47169.	6139.0
#2	2528.8	6185.1	46791.	6117.0
#3	2532.9	6179.5	46925.	6077.7

Raw Data MA13933 page 136 of 198

[Zoom In](#)  
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Sample Name: MP31871-PS1 Acquired: 3/28/2017 16:36:38 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	.0392	109.5	.1401	1.165	.0482	208.0	.0431	.0746	.1423	.2656
Stddev	.0002	.4	.0007	.004	.0002	1.8	.0001	.0001	.0005	.0008
%RSD	.4994	.3292	.4928	.2976	.3474	.8724	.2702	.0893	.3762	.2841

#1	.0391	109.7	.1404	1.168	.0484	206.0	.0432	.0745	.1421	.2662
#2	.0394	109.0	.1406	1.161	.0483	208.4	.0430	.0746	.1419	.2647
#3	.0390	109.6	.1393	1.166	.0480	209.5	.0430	.0746	.1429	.2657

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)
Avg	121.4	36.52	42.32	1.680	.0906	9.194	.1662	.2842	.0883	.0840
Stddev	.4	.11	.22	.006	.0001	.034	.0002	.0009	.0013	.0008
%RSD	.2962	.2939	.5107	.3453	.1139	.3652	.1111	.3309	1.515	.9036

#1	121.7	36.64	42.50	1.678	.0907	9.229	.1664	.2844	.0897	.0843
#2	121.0	36.43	42.08	1.676	.0905	9.163	.1662	.2832	.0881	.0832
#3	121.4	36.49	42.38	1.687	.0907	9.189	.1661	.2850	.0871	.0847

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	1.492	.0601	.7881	1.498	.0931	.2440	.5744
Stddev	.002	.0003	.0010	.004	.0003	.0006	.0006
%RSD	.1330	.4419	.1233	.2620	.3727	.2601	.0984

#1	1.493	.0599	.7888	1.500	.0933	.2439	.5743
#2	1.493	.0604	.7870	1.493	.0927	.2435	.5750
#3	1.490	.0599	.7886	1.500	.0934	.2447	.5739

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2283.5	6923.0	51943.	7039.4
Stddev	4.4	14.7	202.	75.9
%RSD	.19385	.21186	.38919	1.0780

#1	2278.6	6909.8	51998.	6959.5
#2	2287.3	6920.5	52112.	7110.5
#3	2284.5	6938.8	51719.	7048.2

Raw Data MA13933 page 137 of 198

[Zoom In](#)  
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Sample Name: MP31871-S1 Acquired: 3/28/2017 16:40:45 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	.0394	165.8	1.604	2.781	.0479	232.9	.0411	.4120	.2722	.4180
Stddev	.0005	.3	.001	.003	.0002	1.6	.0001	.0004	.0008	.0011
%RSD	1.241	.1585	.0484	.0912	.4529	6949	.3588	.0856	.2863	.2588

#1	.0389	165.8	1.604	2.779	.0478	234.6	.0412	.4123	.2714	.4192
#2	.0396	166.1	1.605	2.781	.0482	231.3	.0409	.4119	.2729	.4171
#3	.0399	165.6	1.604	2.784	.0479	232.8	.0411	.4116	.2723	.4176

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)
Avg	158.2	55.09	65.37	2.246	.3561	21.32	.4830	.7440	.1241	1.515
Stddev	.6	.12	.39	.003	.0007	.05	.0006	.0019	.0005	.002
%RSD	.3953	.2214	.6011	.1523	.1890	.2368	.1207	.2588	.4310	.1116

#1	157.9	54.99	65.21	2.243	.3554	21.32	.4826	.7451	.1236	1.513
#2	159.0	55.23	65.82	2.250	.3567	21.37	.4837	.7418	.1247	1.515
#3	157.8	55.06	65.08	2.244	.3562	21.27	.4827	.7451	.1241	1.516

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	1.810	.4103	1.259	2.264	1.875	.6059	.8178
Stddev	.001	.0007	.003	.003	.002	.0024	.0013
%RSD	.0774	.1812	.2282	.1190	.1057	.3936	.1605

#1	1.809	.4105	1.257	2.261	1.876	.6032	.8164
#2	1.810	.4110	1.262	2.266	1.872	.6077	.8190
#3	1.811	.4095	1.258	2.264	1.876	.6069	.8179

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2232.4	7109.1	53473.	7222.5
Stddev	2.5	7.6	190.	69.7
%RSD	.11328	.10758	.35451	.96537

#1	2229.6	7116.8	53690.	7258.5
#2	2234.6	7101.5	53390.	7142.1
#3	2232.9	7109.1	53339.	7266.8

Raw Data MA13933 page 139 of 198

[Zoom In](#)  
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Sample Name: MP31871-S2 Acquired: 3/28/2017 16:45:00 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	.0402	155.6	1.632	2.724	.0485	216.0	.0411	.4161	.2687	.4089
Stddev	.0003	.5	.002	.008	.0001	.7	.0001	.0006	.0011	.0009
%RSD	.6288	.3183	.1466	.2881	.2472	.3386	.1726	.1504	.4253	.2222

#1	.0402	156.1	1.631	2.733	.0484	216.5	.0410	.4167	.2688	.4097
#2	.0404	155.3	1.634	2.719	.0486	215.2	.0412	.4155	.2698	.4079
#3	.0399	155.3	1.630	2.721	.0485	216.4	.0411	.4161	.2675	.4090

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)
Avg	151.1	53.14	62.90	2.130	.3684	21.67	.4829	.7234	.1291	1.542
Stddev	.3	.21	.25	.013	.0003	.07	.0004	.0010	.0006	.001
%RSD	.1962	.3963	.3931	.6148	.0738	.3114	.0773	.1373	.4634	.0499

#1	151.5	53.35	63.18	2.129	.3687	21.75	.4832	.7233	.1291	1.542
#2	151.0	53.13	62.82	2.144	.3682	21.65	.4829	.7244	.1297	1.542
#3	151.0	52.93	62.70	2.118	.3683	21.62	.4825	.7224	.1285	1.543

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	1.645	.0195	.6804	1.397	.0005	.1917	.3579
Stddev	.002	.0002	.0031	.007	.0011	.0005	.0009
%RSD	.1288	1.089	.4556	.4756	.233.7	.2575	.2643

#1	1.643	.0194	.6840	1.404	.0008	.1921	.3569
#2	1.645	.0198	.6792	1.391	.0011	.1912	.3581
#3	1.647	.0194	.6782	1.395	.0010	.1917	.3587

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2337.3	6973.2	51997.	6893.0
Stddev	2.1	5.1	160.	28.7
%RSD	.09128	.07297	.30834	.41609

#1	2339.5	6979.0	51889.	6901.8
#2	2335.3	6971.1	52181.	6916.3
#3	2337.1	6969.5	51921.	6860.9

Raw Data MA13933 page 138 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: MP31871-D2 Acquired: 3/28/2017 16:49:16 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	.0016	97.17	.0532	.9204	.0057	181.4	.0028	.0328	.0983	.1720
Stddev	.0001	.36	.0002	.0057	.0000	.5	.0000	.0003	.0005	.0011
%RSD	9.086	.3701	.2979	.6218	.8594	.2624	1.617	.7741	.5408	.6485

#1	.0017	97.55	.0532	.9264	.0057	181.9	.0027	.0326	.0985	.1731
#2	.0016	97.11	.0533	.9197	.0058	181.0	.0028	.0327	.0977	.1719
#3	.0014	96.84	.0530	.9150	.0057	181.4	.0028	.0331	.0987	.1709

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)
Avg	113.6	26.46	36.17	1.636	.0034	.5416	.0832	.2146	.0014	.0054
Stddev	.4	.07	.13	.003	.0001	.0027	.0003	.0016	.0004	.0014
%RSD	.3493	.2785	.3549	.2070	3.083	.4975	.3753	.7259	24.43	25.48

#1	114.0	26.53	36.29	1.638	.0035	.5385	.0830	.2133	.0016	.0062
#2	113.3	26.45	36.03	1.632	.0033	.5428	.0831	.2141	.0017	.0038
#3	113.4	26.39	36.18	1.638	.0033	.5434	.0836	.2163	.0010	.0062

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	1.645	.0195	.6804	1.397	.0005	.1917	.3579
Stddev	.002	.0002	.0031	.007	.0011	.0005	.0009
%RSD	.1288	1.089	.4556	.4756	.233.7	.2575	.2643

#1	1.643	.0194	.6840	1.404	.0008	.1921	.3569
#2	1.645	.0198	.6792	1.391	.0011	.1912	.3581
#3	1.647	.0194	.6782	1.395	.0010	.1917	.3587

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2337.3	6973.2	51997.	6893.0
Stddev	2.1	5.1	160.	28.7
%RSD	.09128	.07297	.30834	.41609

#1
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Sample Name: FA42067-1 Acquired: 3/28/2017 16:53:28 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	.0016	111.0	.0529	.8760	.0063	149.5	.0042	.0370	.1075	.2304
Stddev	.0001	.3	.0006	.0012	.0001	.2	.0000	.0000	.0001	.0004
%RSD	7.582	.3035	1.197	.1364	1.549	.1653	.9225	.0542	.1276	.1846
#1	.0017	110.9	.0527	.8760	.0062	149.3	.0042	.0370	.1074	.2306
#2	.0016	111.3	.0525	.8772	.0063	149.8	.0043	.0370	.1076	.2307
#3	.0015	110.7	.0537	.8748	.0064	149.5	.0042	.0370	.1075	.2299
Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	126.3	29.25	34.29	1.777	.0037	.5144	.0953	.2302	.0021	.0049
Stddev	.3	.06	.16	.004	.0001	.0046	.0003	.0012	.0011	.0005
%RSD	.2393	.2180	.4601	.2079	3.883	.8910	.3254	.5069	50.14	11.07
#1	126.2	29.18	34.12	1.774	.0039	.5177	.0950	.2314	.0025	.0054
#2	126.7	29.31	34.41	1.776	.0036	.5092	.0953	.2290	.0009	.0049
#3	126.1	29.24	34.35	1.781	.0037	.5164	.0956	.2301	.0030	.0044
Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062			
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)			
Avg	1.842	.0208	.4951	1.632	-.0018	.2087	.4406			
Stddev	.002	.0003	.0006	.005	.0005	.0002	.0010			
%RSD	.1156	1.676	.1173	.3334	30.78	.1098	.2265			
#1	1.840	.0205	.4946	1.627	-.0017	.2087	.4401			
#2	1.841	.0211	.4958	1.632	-.0013	.2085	.4417			
#3	1.844	.0207	.4950	1.638	-.0023	.2089	.4400			
Int. Std.	In2306	Y_2243	Y_3600	Y_3710						
Avg	2351.7	7308.5	54431.	7299.7						
Stddev	1.5	13.3	104.	44.0						
%RSD	.06277	.18264	.19101	.60337						
#1	2353.2	7316.9	54536.	7347.3						
#2	2351.7	7293.1	54430.	7260.3						
#3	2350.2	7315.5	54328.	7291.5						

Raw Data MA13933 page 141 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: FA42067-2 Acquired: 3/28/2017 16:57:40 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	.0021	128.8	.0567	.8859	.0072	88.83	.0043	.0415	.1251	.2393
Stddev	.0001	.3	.0005	.0030	.0000	.16	.0001	.0001	.0003	.0009
%RSD	3.677	.2454	.9086	.3336	.6585	.1789	2.016	.2473	.2398	.3761
#1	.0022	128.5	.0572	.8832	.0073	88.71	.0042	.0414	.1251	.2383
#2	.0020	129.1	.0562	.8891	.0072	89.01	.0042	.0416	.1248	.2398
#3	.0022	128.7	.0565	.8855	.0072	88.77	.0044	.0416	.1254	.2399
Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_2243)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	145.1	35.63	37.80	2.022	.0044	.5804	.1058	.2868	.0019	.0036
Stddev	.5	.11	.02	.010	.0002	.0022	.0001	.0016	.0007	.0022
%RSD	.3192	.3181	.0405	.5130	5.537	.3860	.0825	.5632	38.97	60.82
#1	144.7	35.51	37.81	2.034	.0045	.5787	.1059	.2886	.0015	.0029
#2	145.6	35.74	37.79	2.013	.0047	.5829	.1059	.2865	.0013	.0019
#3	145.0	35.65	37.79	2.020	.0042	.5795	.1057	.2854	.0027	.0061
Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062			
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)			
Avg	1.721	.0229	.4025	1.738	-.0021	.2429	.5235			
Stddev	.002	.0001	.0019	.002	.0006	.0004	.0003			
%RSD	.1283	.5906	.4786	.1255	27.88	.1530	.0631			
#1	1.718	.0230	.4012	1.740	-.0019	.2433	.5233			
#2	1.721	.0228	.4047	1.736	-.0017	.2426	.5233			
#3	1.723	.0230	.4017	1.739	-.0028	.2428	.5238			
Int. Std.	In2306	Y_2243	Y_3600	Y_3710						
Avg	2345.7	7363.1	55232.	7328.6						
Stddev	4.0	3.1	140.	32.7						
%RSD	.16883	.04196	.25380	.44558						
#1	2341.9	7362.9	55091.	7318.7						
#2	2345.3	7366.3	55372.	7365.1						
#3	2349.8	7360.1	55233.	7302.1						

Raw Data MA13933 page 142 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: FA42067-3 Acquired: 3/28/2017 17:01:50 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	.0020	129.8	.0608	1.025	.0073	173.2	.0044	.0427	.1207	.3510
Stddev	.0002	.7	.0007	.007	.0001	.7	.0001	.0001	.0006	.0009
%RSD	10.96	.5557	1.091	.6873	1.361	.4174	1.529	.3243	.4719	.2507
#1	.0021	129.3	.0603	1.021	.0072	173.9	.0044	.0426	.1201	.3512
#2	.0021	130.7	.0615	1.033	.0074	173.1	.0043	.0428	.1213	.3500
#3	.0017	129.6	.0605	1.021	.0073	172.5	.0044	.0426	.1207	.3518
Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	141.5	33.82	39.71	2.008	.0043	.5713	.1103	.2897	.0023	.0052
Stddev	.8	.21	.22	.015	.0002	.0023	.0004	.0008	.0005	.0011
%RSD	.5457	.6288	.5612	.7213	4.040	.3941	.3440	.2744	19.97	21.94
#1	140.9	33.63	39.49	2.018	.0041	.5693	.1101	.2889	.0023	.0046
#2	142.4	34.05	39.94	1.991	.0044	.5737	.1101	.2904	.0027	.0065
#3	141.3	33.78	39.71	2.013	.0045	.5709	.1108	.2900	.0018	.0045
Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062			
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)			
Avg	1.548	.0222	.5659	1.562	-.0035	.2293	.5413			
Stddev	.002	.0001	.0021	.002	.0008	.0003	.0011			
%RSD	.1121	.3758	.3777	.1320	24.13	.1510	.1970			
#1	1.546	.0223	.5645	1.562	-.0030	.2292	.5404			
#2	1.548	.0221	.5683	1.564	-.0030	.2290	.5412			
#3	1.549	.0223	.5648	1.560	-.0044	.2297	.5425			
Int. Std.	In2306	Y_2243	Y_3600	Y_3710						
Avg	2304.1	7404.4	55320.	7427.5						
Stddev	4.9	13.0	98.	75.1						
%RSD	.21333	.17543	.17666	1.0105						
#1	2309.1	7406.0	55213.	7513.1						
#2	2304.1	7416.5	55344.	7373.1						
#3	2299.3	7390.7	55404.	7396.3						

Raw Data MA13933 page 143 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: CCV Acquired: 3/28/2017 17:06:10 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2479	39.46	1.994	2.010	2.005	39.68	2.015	2.009	2.016	1.987
Stddev	.0009	.12	.002	.003	.006	.16	.001	.002	.003	.001
%RSD	.3679	.2914	.1051	.1650	.3266	.4037	.0680	.0779	.1600	.0713
#1	.2489	39.42	1.992	2.011	2.003	39.63	2.014	2.009	2.014	1.987
#2	.2471	39.59	1.996	2.013	2.013	39.86	2.015	2.008	2.019	1.986
#3	.2478	39.38	1.995	2.007	2.000	39.56	2.017	2.011	2.013	1.989
Check ?	Chk	Pass	Chk	Pass	Chk	Pass	Chk	Pass	Chk	Pass
Value										
Range										
Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	39.88	39.86	39.59	2.046	2.037	40.06	2.019	1.994	1.989	1.998
Stddev	.13	.18	.21	.002	.002	.15	.002	.005	.002	.002
%RSD	.3325	.4433	.5240	.1017	.1179	.3706	.1125	.2389	.1146	.1070
#1	39.87	39.83	39.52	2.044	2.034	40.03	2.017	1.993	1.987	2.001
#2	40.02	40.05	39.82	2.048	2.037	40.22	2.018	1.990	1.989	1.997
#3	39.76	39.70	39.42	2.045	2.039	39.93	2.021	1.999	1.992	1.997
Check ?	Chk	Pass	Chk	Pass	Chk	Pass	Chk	Pass	Chk	Pass
Value										
Range										
Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062			
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm			
Avg	2.006	2.025	2.030	2.042	2.009	2.029	2.027			
Stddev	.002	.001	.005	.004	.003	.003	.002			
%RSD	.0969	.0433	.2246	.1813	.1503	.1635	.1048			
#1	2.004	2.024	2.030	2.042	2.008	2.029	2.025			
#2	2.006	2.026	2.035	2.045	2.007	2.033	2.028			
#3	2.008	2.026	2.025	2.038	2.013	2.027	2.029			
Check ?	None	Chk	Pass	Chk	Pass	Chk	Pass			
Value										
Range										



[Zoom In](#)  
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Sample Name: CCV Acquired: 3/28/2017 17:06:10 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2330.0	5747.2	42952.	5683.5
Stddev	4.8	5.9	118.	44.5
%RSD	.20695	.10180	.27528	.78281
#1	2333.7	5753.6	43062.	5685.1
#2	2331.7	5745.8	42827.	5638.3
#3	2324.5	5742.1	42968.	5727.2

Raw Data MA13933 page 145 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: CCB Acquired: 3/28/2017 17:10:06 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2736.6	6081.4	45730.	5857.0
Stddev	10.7	11.7	128.	26.7
%RSD	.39057	.19318	.27952	.48975
#1	2732.7	6075.2	45824.	5865.9
#2	2748.7	6095.0	45584.	5880.2
#3	2728.5	6074.1	45781.	5824.9

Raw Data MA13933 page 147 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: CCB Acquired: 3/28/2017 17:10:06 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0137	.0000	.0008	.0008	.0206	.0003	.0001	.0006
Stddev	.0002	.0042	.000	.0001	.0001	.0031	.0001	.0001	.0001
%RSD	237.2	30.97	948.6	13.15	9.144	15.20	54.65	85.22	8.166
#1	.0003	.0176	.0004	.0006	.0007	.0180	.0004	.0002	.0007
#2	-.0002	.0142	-.0004	.0008	.0008	.0198	.0002	.0000	.0007
#3	.0002	.0092	-.0001	.0008	.0008	.0241	.0001	.0001	.0006

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Elem	Cu3247	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	.0295	.0603	.0083	.0007	F.0017	.0195	.0001	.0004
Stddev	.0001	.0013	.0282	.0234	.0001	.0004	.0074	.0002	.0002
%RSD	14.25	4.386	46.72	283.6	9.780	25.32	37.65	146.6	52.99
#1	.0007	.0309	.0928	.0353	.0008	.0022	.0114	.0003	.0003
#2	.0008	.0294	.0421	-.0040	.0007	.0016	.0216	.0000	.0003
#3	.0006	.0284	.0460	-.0065	.0007	.0013	.0257	.0000	.0007

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Fail Chk Pass Chk Pass Chk Pass  
High Limit .0010  
Low Limit -.0010

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015	.0007	.0005	.0005	.0007	.0011	-.0008	.0004	.0003
Stddev	.0007	.0005	.0006	.0001	.0000	.0001	.0002	.0004	.0002
%RSD	46.86	66.87	119.0	15.97	1.813	11.16	32.40	84.94	64.38
#1	.0007	.0006	.0012	.0005	.0007	.0012	-.0005	.0007	.0004
#2	.0020	.0012	.0005	.0006	.0008	.0010	-.0010	.0005	.0002
#3	.0017	.0003	-.0001	.0004	.0008	.0009	-.0007	.0000	.0001

Check ? Chk Pass Chk Pass None Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Raw Data MA13933 page 146 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: FA42067-4 Acquired: 3/28/2017 17:14:22 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	.0030	104.6	.0568	.7676	.0063	73.48	.0045	.0385	.1172	.2276
Stddev	.0001	.2	.0004	.0009	.0000	.18	.0000	.0002	.0004	.0003
%RSD	2.173	.1595	.6509	.1113	.4197	.2435	.1940	.4850	.3067	.1415
#1	.0030	104.5	.0565	.7668	.0063	73.37	.0045	.0385	.1169	.2279
#2	.0031	104.5	.0572	.7676	.0063	73.38	.0045	.0384	.1171	.2278
#3	.0029	104.8	.0566	.7685	.0063	73.68	.0045	.0387	.1176	.2273

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	141.0	29.66	32.60	1.861	.0046	.5339	.0933	.2679	.0016	.0051
Stddev	.1	.05	.10	.017	.0001	.0027	.0003	.0008	.0007	.0005
%RSD	.0667	.1709	.2978	.9335	1.228	.5020	.2733	.3149	41.48	9.842
#1	141.0	29.61	32.53	1.849	.0047	.5316	.0935	.2689	.0016	.0045
#2	140.9	29.65	32.55	1.853	.0046	.5331	.0930	.2674	.0023	.0055
#3	141.1	29.71	32.71	1.881	.0046	.5368	.0934	.2675	.0010	.0053

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	1.729	.0208	.3512	1.767	-.0021	.2427	.4890
Stddev	.001	.0002	.0001	.002	.0009	.0003	.0004
%RSD	.0746	1.201	.0274	.1025	44.27	.1423	.0763
#1	1.730	.0209	.3513	1.769	-.0031	.2423	.4894
#2	1.728	.0209	.3512	1.766	-.0018	.2428	.4888
#3	1.728	.0205	.3511	1.766	-.0014	.2429	.4888

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2399.5	7322.9	54893.	7203.1
Stddev	8.6	11.5	163.	26.0
%RSD	.35942	.15639	.29623	.36041
#1	2391.7	7309.7	54995.	7212.1
#2	2398.1	7328.6	54977.	7223.4
#3	2408.7	7330.4	54705.	7173.9

Raw Data MA13933 page 148 of 198



[Zoom In](#)  
[Zoom Out](#)

Sample Name: FA42067-6 Acquired: 3/28/2017 17:18:31 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	.0015	90.35	.0450	.6398	.0054	65.86	.0031	.0312	.0934	.1297
Stddev	.0000	.06	.0007	.0026	.0000	.05	.0001	.0002	.0001	.0007
%RSD	.6698	.0686	1.473	.4028	.5884	.0770	2.343	.7075	.1380	.5771

#1	.0015	90.41	.0457	.6425	.0054	65.87	.0030	.0311	.0934	.1292
#2	.0015	90.29	.0444	.6393	.0054	65.81	.0031	.0311	.0936	.1306
#3	.0015	90.33	.0448	.6374	.0054	65.91	.0032	.0315	.0933	.1294

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	111.4	25.80	27.92	1.518	.0035	.4110	.0783	.2147	.0020	.0044
Stddev	.1	.07	.10	.003	.0001	.0043	.0000	.0016	.0006	.0009
%RSD	.0455	.2630	.3638	.2109	2.969	1.045	.0408	.7397	29.28	20.71

#1	111.5	25.88	27.89	1.519	.0034	.4122	.0782	.2153	.0014	.0037
#2	111.4	25.77	27.83	1.514	.0036	.4146	.0783	.2129	.0026	.0054
#3	111.4	25.75	28.03	1.520	.0034	.4063	.0783	.2160	.0021	.0041

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	1.755	.0202	.2914	1.398	-.0016	.1837	.3729
Stddev	.002	.0001	.0009	.003	.0016	.0002	.0006
%RSD	.1301	.6364	.3090	.2299	95.15	.0882	.1652

#1	1.755	.0201	.2925	1.395	-.0005	.1837	.3727
#2	1.753	.0201	.2911	1.400	-.0034	.1835	.3724
#3	1.757	.0203	.2908	1.400	-.0010	.1838	.3736

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2445.7	7121.2	53516.	7049.0
Stddev	7.9	12.1	160.	30.7
%RSD	.32278	.17028	.29923	.43503

#1	2439.5	7115.2	53487.	7084.1
#2	2454.6	7135.2	53688.	7036.2
#3	2443.0	7113.3	53372.	7026.9

Raw Data MA13933 page 149 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: FA42067-7 Acquired: 3/28/2017 17:22:35 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	.0015	94.28	.0637	.7328	.0057	86.40	.0028	.0351	.1001	.1509
Stddev	.0004	.16	.0007	.0005	.0000	.09	.0000	.0001	.0006	.0010
%RSD	24.00	.1665	1.124	.0700	.7027	.1068	1.420	.2607	.6111	.6919

#1	.0017	94.13	.0640	.7331	.0058	86.31	.0028	.0352	.1007	.1513
#2	.0011	94.44	.0629	.7332	.0057	86.49	.0028	.0350	.0995	.1517
#3	.0018	94.26	.0642	.7322	.0057	86.39	.0028	.0351	.1001	.1497

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_2243)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	121.3	26.50	30.13	1.636	.0041	.4379	.0859	.2066	.0010	.0042
Stddev	.3	.07	.10	.001	.0001	.0063	.0004	.0009	.0005	.0009
%RSD	.2314	.2462	.3182	.0675	1.936	1.434	.4134	.4126	50.31	21.36

#1	121.1	26.47	30.05	1.635	.0042	.4314	.0858	.2076	.0009	.0042
#2	121.7	26.57	30.23	1.635	.0040	.4382	.0863	.2061	.0016	.0050
#3	121.3	26.45	30.10	1.637	.0041	.4440	.0857	.2062	.0006	.0032

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	1.568	.0197	.3537	1.320	-.0010	.2022	.3455
Stddev	.003	.0001	.0011	.002	.0003	.0003	.0001
%RSD	.2082	.5197	.2981	.1334	26.60	.1339	.0256

#1	1.566	.0197	.3535	1.319	-.0011	.2022	.3454
#2	1.566	.0197	.3548	1.322	-.0007	.2019	.3456
#3	1.572	.0195	.3527	1.319	-.0011	.2024	.3456

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2444.5	7233.1	54354.	7088.3
Stddev	3.1	5.1	158.	49.8
%RSD	.12773	.07020	.29061	.70237

#1	2442.3	7228.1	54326.	7141.0
#2	2448.1	7238.3	54523.	7042.0
#3	2443.1	7232.8	54211.	7082.0

Raw Data MA13933 page 150 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: FA42152-1 Acquired: 3/28/2017 17:26:39 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	.0016	100.7	.0551	.7873	.0061	99.52	.0031	.0346	.1034	.1548
Stddev	.0002	.4	.0008	.0002	.0001	.40	.0001	.0001	.0002	.0004
%RSD	10.95	.3761	1.387	.0290	1.069	.4044	3.314	.2329	.2253	.2503

#1	.0018	100.2	.0542	.7870	.0061	99.06	.0032	.0346	.1032	.1547
#2	.0016	100.8	.0556	.7874	.0062	99.78	.0030	.0345	.1033	.1553
#3	.0015	101.0	.0555	.7874	.0060	99.73	.0031	.0346	.1036	.1545

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	122.8	27.56	32.04	1.638	.0040	.4928	.0848	.2304	.0013	.0042
Stddev	.6	.04	.17	.006	.0001	.0033	.0003	.0001	.0008	.0014
%RSD	.5105	.1407	.5315	.3881	3.262	.6610	.3673	.0378	63.99	34.75

#1	122.0	27.53	31.85	1.633	.0040	.4960	.0847	.2304	.0021	.0058
#2	123.1	27.60	32.17	1.635	.0041	.4928	.0846	.2303	.0013	.0037
#3	123.2	27.60	32.10	1.645	.0039	.4895	.0852	.2305	.0004	.0030

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	1.415	.0201	.4275	1.571	-.0018	.2099	.3721
Stddev	.004	.0004	.0013	.005	.0008	.0006	.0002
%RSD	.2674	1.839	.3101	.3183	44.65	.3062	.0491

#1	1.419	.0200	.4261	1.569	-.0009	.2101	.3720
#2	1.412	.0198	.4277	1.568	-.0021	.2091	.3721
#3	1.414	.0205	.4287	1.577	-.0024	.2103	.3723

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2412.1	7225.2	53970.	7085.8
Stddev	2.7	10.5	365.	68.3
%RSD	.11052	.14550	.67555	.96421

#1	2409.1	7213.7	54213.	7156.8
#2	2413.5	7234.4	54147.	7020.6
#3	2413.8	7227.4	53551.	7080.0

Raw Data MA13933 page 151 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: FA42152-3 Acquired: 3/28/2017 17:30:44 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	.0016	110.5	.0600	.9038	.0066	115.4	.0033	.0376	.1157	.1645
Stddev	.0001	.3	.0006	.0026	.0001	.2	.0000	.0001	.0004	.0007
%RSD	5.275	.2688	.9549	.2887	.8570	1.850	1.344	.3488	.3574	.3989

#1	.0016	110.6	.0602	.9029	.0066	115.6	.0032	.0376	.1162	.1649
#2	.0017	110.8	.0594	.9067	.0065	115.5	.0033	.0375	.1153	.1637
#3	.0017	110.2	.0604	.9016	.0066	115.2	.0032	.0377	.1156	.1648

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	133.7	30.73	35.77	1.856	.0045	.5362	.0953	.2648	.0014	.0044
Stddev	.4	.08	.14	.015	.0003	.0054	.0002	.0027	.0003	.0011
%RSD	.3307	.2712	.3945	.8015	6.577	1.013	.1756	1.004	20.58	24.27

#1	134.2	30.76	35.93	1.866	.0048	.5314	.0955	.2637	.0012	.0039
#2	133.5	30.79	35.72	1.839	.0042	.5421	.0952	.2629	.0017	.0056
#3	133.3	30.63	35.66	1.863	.0043	.5350	.0951	.2678	.0013	.0036

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	1.245	.0211	.4952	1.464	-.0033	.2186	.4108
Stddev	.002	.0002	.0015	.001	.0008	.0001	.0013
%RSD	.1176	.8717	.3091	.0745	24.67	.0528	.3146

#1	1.244	.0211	.4961	1.464	-.0039	.2187	.4115
#2	1.246	.0210	.4960	1.465	-.0024	.2188	.4093
#3	1.244	.0213	.4934	1.463	-.0035	.2185	.4116

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2375.9	7336.8	54489.	7121.8
Stddev	2.3	11.4	188.	42.9
%RSD	.09642	.15533	.34464	.60262

#1
----

◀ Zoom In ▶  
Zoom Out

Sample Name: FA42152-9    Acquired: 3/28/2017 17:34:51    Type: Unk  
Method: 60102007\_041712(v608)    Mode: CONC    Corr. Factor: 1.000000  
User: admin    SSTRACE02:    Custom ID2:    Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	.0015	97.81	.0491	.7226	.0055	108.4	.0034	.0304	.0949	.1692
Stddev	.0001	.18	.0005	.0023	.0000	.2	.0001	.0001	.0005	.0006
%RSD	8.186	.1887	.9641	.3185	.3751	.1978	2.371	.2518	.5528	.3783

#1	.0017	97.66	.0490	.7208	.0056	108.2	.0035	.0305	.0954	.1686
#2	.0014	98.02	.0487	.7252	.0055	108.6	.0033	.0303	.0944	.1692
#3	.0016	97.75	.0496	.7217	.0055	108.3	.0033	.0304	.0950	.1699

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_2243)
Avg	112.4	27.92	30.30	1.578	.0032	.4915	.0794	.2863	.0016	.0054
Stddev	.1	.09	.10	.005	.0000	.0036	.0000	.0009	.0008	.0001
%RSD	.0941	.3370	.3146	.2957	1.528	.7319	.0384	.3185	48.10	2.444

#1	112.4	27.87	30.26	1.580	.0033	.4901	.0794	.2872	.0025	.0055
#2	112.5	28.03	30.41	1.573	.0032	.4955	.0794	.2854	.0013	.0053
#3	112.3	27.87	30.24	1.582	.0032	.4887	.0794	.2864	.0010	.0053

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	1.855	.0218	.4002	1.522	.0021	.1858	.3810
Stddev	.001	.0001	.0005	.003	.0006	.0007	.0003
%RSD	.0664	.6685	.1290	.1922	30.29	.3735	.0816

#1	1.856	.0217	.4005	1.521	-.0014	.1865	.3813
#2	1.853	.0216	.4005	1.520	-.0021	.1852	.3809
#3	1.856	.0219	.3996	1.525	-.0027	.1856	.3807

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2396.5	7145.7	52989.	6915.4
Stddev	3.3	8.0	358.	25.7
%RSD	.13834	.11262	.67495	.37203

#1	2397.0	7138.0	52698.	6944.1
#2	2399.5	7154.1	53388.	6894.4
#3	2392.9	7144.9	52881.	6907.6

Raw Data MA13933    page 153 of 198

◀ Zoom In ▶  
Zoom Out

Sample Name: FA42152-2    Acquired: 3/28/2017 17:38:54    Type: Unk  
Method: 60102007\_041712(v608)    Mode: CONC    Corr. Factor: 1.000000  
User: admin    SSTRACE02:    Custom ID2:    Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	.0015	87.76	.0494	.7053	.0052	90.75	.0022	.0280	.0883	.1247
Stddev	.0001	.11	.0002	.0013	.0000	.06	.0000	.0000	.0000	.0001
%RSD	6.063	.1255	.3121	.1870	.7161	.0647	1.511	.1289	.0526	.1096

#1	.0015	87.81	.0494	.7051	.0052	90.73	.0022	.0280	.0883	.1248
#2	.0016	87.85	.0496	.7068	.0052	90.82	.0021	.0281	.0884	.1246
#3	.0014	87.64	.0493	.7042	.0053	90.70	.0022	.0280	.0883	.1249

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_2243)
Avg	108.6	24.38	28.41	1.435	.0029	.4610	.0730	.1920	.0012	.0034
Stddev	.1	.03	.10	.003	.0001	.0115	.0003	.0008	.0012	.0007
%RSD	.0505	.1321	.3673	.2089	4.769	2.487	.3761	.4070	101.6	22.12

#1	108.6	24.38	28.41	1.437	.0031	.4653	.0727	.1929	-.0002	.0041
#2	108.6	24.41	28.51	1.432	.0028	.4481	.0731	.1916	.0019	.0026
#3	108.7	24.34	28.30	1.437	.0030	.4698	.0733	.1915	.0018	.0034

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	1.442	.0200	.3846	1.565	-.0018	.1889	.3204
Stddev	.001	.0004	.0001	.001	.0010	.0002	.0003
%RSD	.0835	2.161	.0250	.0833	57.26	.0811	.1038

#1	1.441	.0200	.3845	1.566	-.0011	.1888	.3204
#2	1.443	.0196	.3846	1.564	-.0013	.1888	.3201
#3	1.443	.0205	.3846	1.565	-.0029	.1891	.3208

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2412.5	7005.9	51629.	6721.4
Stddev	6.5	4.0	184.	28.4
%RSD	.26882	.05646	.35715	.42218

#1	2409.4	7008.5	51479.	6700.6
#2	2420.0	7001.3	51835.	6709.9
#3	2408.3	7007.8	51573.	6753.7

Raw Data MA13933    page 154 of 198

◀ Zoom In ▶  
Zoom Out

Sample Name: MP31872-MB1    Acquired: 3/28/2017 17:42:58    Type: QC  
Method: 60102007\_041712(v608)    Mode: CONC    Corr. Factor: 1.000000  
User: admin    SSTRACE02:    Custom ID2:    Custom ID3:  
Comment:

Elem	Units	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
Avg	Units	-.0003	.0221	-.0005	.0004	.0001	.0299	.0000	.0000	.0001	.0004
Stddev	Units	.0005	.0074	.0003	.0001	.0001	.0056	.000	.0000	.0001	.0002
%RSD	Units	145.8	33.65	71.42	33.79	90.41	18.76	89.14	172.9	137.5	55.57

#1	.0001	.0294	-.0004	.0003	.0000	.0242	.0000	.0000	.0000	.0000	.0002
#2	-.0009	.0223	-.0002	.0005	.0001	.0301	.0000	.0000	.0000	.0000	.0003
#3	-.0002	.0146	-.0008	.0003	.0001	.0354	-.0001	.0001	.0002	.0002	.0006

Check ?    Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Elem	Units	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
Avg	Units	.0489	.0401	.0242	.0004	-.0002	-.0012	-.0001	.0001	.0002	.0007
Stddev	Units	.0012	.0113	.0180	.0000	.0001	.0019	.0001	.0003	.0010	.0008
%RSD	Units	2.487	28.18	74.34	7.290	63.70	151.8	133.4	401.7	470.7	125.5

#1	.0499	.0505	.0060	.0004	-.0002	-.0024	-.0003	-.0004	-.0004	.0008
#2	.0493	.0281	.0419	.0004	-.0002	-.0022	-.0002	.0001	.0014	-.0002
#3	.0475	.0418	.0245	.0004	.0000	.0009	.0000	-.0002	-.0003	.0014

Check ?    Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Elem	Units	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
Avg	Units	.0024	.0002	.0001	.0008	-.0012	-.0001	.0001
Stddev	Units	.0004	.0002	.0001	.0001	.0007	.0002	.0000
%RSD	Units	16.86	86.60	93.91	9.893	54.81	248.8	24.95

#1	.0026	.0001	.0000	.0008	-.0020	.0001	.0001	.0001
#2	.0026	.0001	.0001	.0007	-.0007	.0000	.0001	.0001
#3	.0019	.0004	.0001	.0008	-.0010	-.0003	.0001	.0001

Check ?    None Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Raw Data MA13933    page 155 of 198

◀ Zoom In ▶  
Zoom Out

Sample Name: MP31872-MB1    Acquired: 3/28/2017 17:42:58    Type: QC  
Method: 60102007\_041712(v608)    Mode: CONC    Corr. Factor: 1.000000  
User: admin    SSTRACE02:    Custom ID2:    Custom ID3:  
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cls/S	Cls/S	Cls/S	Cls/S
Avg	2726.3	6135.3	45949.	5727.6
Stddev	4.0	8.7	123.	94.6
%RSD	.14544	.14123	.26727	1.6518

#1	2723.1	6129.4	46054.	5784.3
#2	2725.1	6145.3	45814.	5780.2
#3	2730.8	6131.4	45978.	5618.4

Sample Name: MP31872-B1 Acquired: 3/28/2017 17:47:13 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0468	27.19	2.006	2.051	.0522	25.51	.0495	.4909	.1990	.2526
Stddev	.0003	.08	.007	.007	.0001	.02	.0002	.0016	.0013	.0010
%RSD	.6882	.3124	.3497	.3292	.1117	.0852	.3266	.3339	.6739	.4153
#1	.0466	27.22	1.998	2.043	.0522	25.53	.0493	.4890	.1980	.2520
#2	.0471	27.25	2.009	2.057	.0523	25.50	.0496	.4916	.1984	.2520
#3	.0466	27.09	2.011	2.051	.0522	25.49	.0496	.4920	.2005	.2538

Check ? Chk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk Pass  
Value  
Range

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	26.67	26.09	25.24	5143	.5618	25.53	.5062	.4980	.5029	2.003
Stddev	.04	.05	.08	.0020	.0027	.06	.0011	.0020	.0018	.009
%RSD	.1553	.1792	.3212	.3952	.4858	.2300	.2183	.3999	.3538	.4733
#1	26.72	26.04	25.33	.5126	.5588	25.52	.5050	.4965	.5013	1.993
#2	26.64	26.11	25.18	.5138	.5626	25.59	.5071	.5002	.5048	2.011
#3	26.66	26.12	25.21	.5166	.5641	25.48	.5066	.4971	.5026	2.006

Check ? Chk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk Pass  
Value  
Range

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0082	.5505	.5582	.5454	2.040	.4903	.5092
Stddev	.0005	.0015	.0011	.0024	.002	.0027	.0023
%RSD	6.135	.2668	.1922	.4381	.0797	.5567	.4608
#1	.0077	.5488	.5571	.5429	2.038	.4872	.5066
#2	.0087	.5512	.5592	.5455	2.041	.4920	.5100
#3	.0082	.5515	.5582	.5477	2.041	.4919	.5110

Check ? None Chk Pass None None Chk PassChk PassChk Pass  
Value  
Range

Raw Data MA13933 page 157 of 198

Sample Name: MP31872-B1 Acquired: 3/28/2017 17:47:13 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2460.2	5968.5	44480.	5760.8
Stddev	7.7	19.9	311.	7.5
%RSD	.31201	.33408	.69977	.12962
#1	2467.7	5991.4	44819.	5752.4
#2	2452.4	5955.0	44415.	5766.6
#3	2460.6	5959.0	44207.	5763.4

Raw Data MA13933 page 158 of 198

Sample Name: FA42279-8 Acquired: 3/28/2017 17:51:13 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Avg	.0002	.0028	.0002	.0592	.0001	30.77	.0000	.0001	.0001
Stddev	.0003	.0016	.0006	.0002	.0001	.09	.000	.0001	.0003
%RSD	137.1	59.23	392.6	.3644	48.42	.2777	116.3	160.2	184.4
#1	-.0001	-.0041	-.0002	.0593	.0002	30.84	.0000	.0000	.0002
#2	.0002	-.0009	.0009	.0594	.0001	30.80	-.0001	.0001	-.0001
#3	.0006	-.0033	-.0002	.0590	.0001	30.68	.0000	.0003	.0004

Elem	Cu3247	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)
Avg	.0006	.0106	.3585	1.766	.5272	-.0001	F146.1	.0002	.0018
Stddev	.0002	.0050	.0166	.018	.0018	.0001	1.6	.0003	.0004
%RSD	35.12	47.18	4.618	1.046	.3352	87.19	1.097	172.6	20.53
#1	.0008	.0151	.3436	1.786	.5268	.0000	147.9	.0005	.0021
#2	.0005	.0115	.3556	1.750	.5292	-.0001	145.5	.0000	.0014
#3	.0005	.0052	.3764	1.762	.5257	-.0001	144.8	.0000	.0019

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	.0000	.0005	.1472	.0003	.0324	.0017	-.0004	.0002	.0090
Stddev	.001	.0004	.0016	.0004	.0001	.0000	.0004	.0000	.0000
%RSD	13200.	77.09	1.086	132.6	.2613	2.432	105.0	9.889	.5524
#1	.0015	.0009	.1463	.0007	.0325	.0017	-.0004	.0002	.0090
#2	-.0006	.0004	.1463	.0007	.0325	.0017	.0000	.0002	.0089
#3	-.0010	.0001	.1491	.0003	.0323	.0017	-.0008	.0002	.0090

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2435.1	5885.2	43288.	5687.8
Stddev	4.3	20.3	160.	28.2
%RSD	.17725	.34535	.36988	.49539
#1	2435.9	5863.9	43301.	5661.2
#2	2430.4	5887.3	43122.	5717.3
#3	2438.9	5904.4	43442.	5685.0

Raw Data MA13933 page 159 of 198

Sample Name: CCV Acquired: 3/28/2017 17:55:35 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2475	39.70	1.971	2.055	2.061	39.91	1.950	1.946	2.002	2.013
Stddev	.0002	.08	.002	.007	.003	.13	.002	.001	.005	.002
%RSD	.0799	.1894	.0766	.3449	.1627	.3315	.1093	.0602	.2294	.1106
#1	.2473	39.72	1.970	2.052	2.061	40.00	1.951	1.947	2.004	2.016
#2	.2475	39.61	1.972	2.051	2.057	39.76	1.948	1.944	2.005	2.013
#3	.2477	39.76	1.973	2.064	2.063	39.96	1.952	1.946	1.997	2.012

Check ? Chk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk Pass  
Value  
Range

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	40.73	41.19	40.43	2.077	2.024	40.06	1.993	2.026	1.967	1.968
Stddev	.07	.10	.11	.005	.002	.12	.001	.007	.003	.002
%RSD	.1731	.2319	.2761	.2242	.0782	.3017	.0601	.3263	.1555	.0820
#1	40.72	41.25	40.48	2.081	2.023	40.15	1.994	2.030	1.967	1.966
#2	40.66	41.08	40.30	2.079	2.023	39.92	1.991	2.018	1.964	1.969
#3	40.80	41.24	40.50	2.072	2.026	40.10	1.993	2.029	1.970	1.970

Check ? Chk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk Pass  
Value  
Range

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.980	1.987	2.091	2.057	2.034	2.031	2.035
Stddev	.002	.001	.003	.007	.007	.006	.001
%RSD	.0857	.0598	.1524	.3354	.3417	.2787	.0346
#1	1.981	1.987	2.091	2.065	2.040	2.037	2.036
#2	1.978	1.986	2.088	2.055	2.027	2.031	2.035
#3	1.980	1.988	2.095	2.052	2.034	2.025	2.035

Check ? None Chk PassChk PassChk PassChk PassChk PassChk Pass  
Value  
Range

Raw Data MA13933 page 160 of 198

Sample Name: CCV	Acquired: 3/28/2017 17:55:35	Type: QC
Method: 60102007_041712(v608)	Mode: CONC	Corr. Factor: 1.000000
User: admin	SSTRACE02:	Custom ID2:
Comment:		Custom ID3:

Int. Std.	ln2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2343.7	5854.1	4287.0	5504.7
Stddev	7.6	3.9	186.	43.2
%RSD	.32400	.06610	.43445	.78520
#1	2337.4	5849.7	42666.	5493.8
#2	2352.1	5855.4	42915.	5552.3
#3	2341.6	5857.1	43030.	5468.0

#1	2337.4	5849.7	42666.	5493.8
#2	2352.1	5855.4	42915.	5552.3
#3	2341.6	5857.1	43030.	5468.0

Raw Data MA13933 page 161 of 198

Sample Name: CCB	Acquired: 3/28/2017 17:59:32	Type: QC
Method: 60102007_041712(v608)	Mode: CONC	Corr. Factor: 1.000000
User: admin	SSTRACE02:	Custom ID2:
Comment:		Custom ID3:

Elem Units	Ag3280 ppm	Al3961 ppm	As1890 ppm	Ba4554 ppm	Be3130 ppm	Ca3179 ppm	Cd2265 ppm	Co2286 ppm	Cr2677 ppm
Avg	-0.002	0.068	-0.001	0.008	0.007	0.123	0.002	0.002	0.005
Stdev	0.002	0.038	0.002	0.001	0.001	0.027	0.001	0.001	0.001
%RSD	78.66	55.73	217.0	7.470	13.60	21.80	43.45	26.62	11.03
#1	0.000	0.036	0.001	0.008	0.008	0.094	0.004	0.002	0.005
#2	-0.003	0.019	-0.004	0.008	0.006	0.127	0.002	0.002	0.004
#3	-0.003	0.057	-0.001	0.009	0.008	0.147	0.002	0.001	0.005

#1	.0000	.0036	.0001	.0008	.0008	.0094	.0004	.0002	.0005
#2	-.0003	.0109	-.0004	.0008	.0006	.0127	.0002	.0002	.0004
#3	-.0003	.0057	-.0001	.0009	.0008	.0147	.0002	.0001	.0005

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem Units	Cu3247 ppm	Fe2599 ppm	K_7664 ppm	Mg2790 ppm	Mn2576 ppm	Mo2020 ppm	Na5895 ppm	Ni2316 ppm	Pb2203 ppm
Avg	.0007	.0257	.0557	.0150	.0006	F.0016	.0241	.0001	F.0011
Stddev	.0001	.0038	.0065	.0097	.0001	.0003	.0038	.0001	.0004
%RSD	11.63	14.61	11.74	64.45	12.30	21.30	15.64	139.6	40.24
#1	.0006	.0292	.0484	.0255	.0007	.0020	.0214	.0001	.0012
#2	.0007	.0263	.0610	.0064	.0006	.0015	.0284	.0000	.0015
#3	.0008	.0217	.0576	.0132	.0005	.0013	.0225	.0002	.0006

#1	.0006	.0292	.0484	.0255	.0007	.0020	.0214	.0001	.0012
#2	.0007	.0263	.0610	.0064	.0006	.0015	.0284	.0000	.0015
#3	.0008	.0217	.0576	.0132	.0005	.0013	.0225	.0002	.0006

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail
High Limit						.0010			.0010
Low Limit						-.0010			-.0010

	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
Elem	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Units									
Avg	.0014	.0003	.0009	.0006	.0006	.0009	-.0001	.0005	.0002
Stddev	.0006	.0006	.0001	.0001	.0002	.0001	.0006	.0001	.0001
%RSD	46.41	223.1	11.63	9.033	25.87	16.61	478.8	19.48	44.34
#1	.0017	-.0004	.0009	.0006	.0004	.0010	.0004	.0004	.0003
#2	.0018	.0007	.0008	.0006	.0007	.0009	-.0001	.0006	.0002
#3	.0006	.0005	.0010	.0005	.0006	.0007	-.0008	.0005	.0001

#1	.0017	-.0004	.0009	.0006	.0004	.0010	.0004	.0004	.0003
#2	.0018	.0007	.0008	.0006	.0007	.0009	-.0001	.0006	.0002
#3	.0006	.0005	.0010	.0005	.0006	.0007	-.0008	.0005	.0001

Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Raw Data MA13933 page 162 of 198

Sample Name: CCB	Acquired: 3/28/2017 17:59:32	Type: QC
Method: 60102007_041712(v608)	Mode: CONC	Corr. Factor: 1.000000
User: admin	SSTRACE02:	Custom ID2: Custom ID3:
Comment:		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2731.7	6182.1	45674.	5653.3
Stddev	4.7	10.3	131.	43.8
%RSD	.17344	.16625	.28706	.77558
#1	2736.9	6193.6	45822.	5698.8
#2	2727.6	6173.8	45627.	5649.7
#3	2730.5	6179.0	45573.	5611.3

#1	2736.9	6193.6	45822.	5698.8
#2	2727.6	6173.8	45627.	5649.7
#3	2730.5	6179.0	45573.	5611.3

Raw Data MA13933 page 163 of 198

Sample Name: MP31872-D1	Acquired: 3/28/2017 18:03:47	Type: Unk
Method: 60102007_041712(v608)	Mode: CONC	Corr. Factor: 1.000000
User: admin	SSTRACE02:	Custom ID2: Custom ID3:
Comment:		

Elm	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2686	Cr2672
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	-0.003	0.063	0.001	0.060	0.002	31.12	0.000	0.000	0.002
Stddev	0.001	0.023	0.004	0.006	0.000	0.35	0.000	0.000	0.002
%RSD	40.68	36.20	405.1	95.82	15.01	1.131	188.7	91.08	92.65
#1	-0.002	0.089	-0.001	0.067	0.002	31.49	0.000	0.001	0.002
#2	-0.002	0.050	0.005	0.057	0.002	30.79	0.000	0.000	0.004
#3	-0.004	0.049	-0.001	0.056	0.001	31.09	0.000	0.000	0.000

#1	-0.0002	.0089	-.0001	.0607	.0002	31.49	.0000	.0001	.0002
#2	-0.0002	.0050	.0005	.0597	.0002	30.79	.0000	.0000	.0004
#3	-0.0004	.0049	-.0001	.0596	.0001	31.09	.0000	.0000	.0000

Elem	Cu3247	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
IS ref	(Y_3610)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)
Avg	.0004	.0034	.2861	1.824	.5345	.0000	F149.3	.0001	.0021
Stddev	.0000	.0019	.0386	.034	.0004	.0002	2.4	.0001	.0003
%RSD	7.568	55.97	13.49	1.871	.0786	898.1	1.636	70.88	14.53
#1	.0004	.0014	.2579	1.855	.5348	.0002	150.1	.0003	.0025
#2	.0004	.0036	.2703	1.787	.5341	.0001	146.5	.0001	.0018
#3	.0004	.0051	.3301	1.828	.5348	-.0002	151.2	.0001	.0021

#1	.0004	.0014	.2579	1.855	.5348	.0002	150.1	.0003	.0025
#2	.0004	.0036	.2703	1.787	.5341	.0001	146.5	.0001	.0018
#3	.0004	.0051	.3301	1.828	.5348	-.0002	151.2	.0001	.0021

Elm	Sh2068 (Y_2243)	Se1960 (Y_2241)	Si2124 (Y_2243)	Nt1899 (Y_2243)	Sr4077 (Y_3710)	Ti3349 (Y_3600)	Ti1908 (In2306)	Y_2924 (Y_3600)	Zn2062 (Y_3600)
Avg	-0.001	-0.008	-0.150	-0.003	-0.030	-0.016	-0.011	-0.004	-0.087
Stdev	-0.005	-0.010	-0.011	-0.002	-0.003	-0.001	-0.011	-0.001	-0.001
%RSD	552.0	130.8	7443	57.15	9934	4.071	101.9	26.22	6051
#1	-0.001	-0.019	-0.153	-0.001	-0.033	-0.017	-0.002	-0.005	-0.087
#2	-0.007	-0.001	-0.138	-0.005	-0.026	-0.016	-0.023	-0.003	-0.087
#3	-0.003	-0.006	-0.159	-0.002	-0.031	-0.016	-0.007	-0.004	-0.088

#1	.0001	.0019	.1453	.0001	.0333	.0017	-.0002	.0005	.0087
#2	-.0007	-.0001	.1438	.0005	.0326	.0016	-.0023	.0003	.0087
#3	.0003	.0006	.1459	.0002	.0331	.0016	-.0007	.0004	.0088

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2416.1	5874.1	42793.	5514.7
Stddev	5.3	10.6	78.	36.3
%RSD	.21848	.18075	.18118	.65907
#1	2420.5	5886.0	42857.	5507.3
#2	2417.4	5870.8	42707.	5554.1
#3	2410.2	5865.6	42816.	5482.5

#1	2420.5	5886.0	42857.	5507.3
#2	2417.4	5870.8	42707.	5554.1
#3	2410.2	5865.6	42816.	5482.5

Raw Data MA13933 page 164 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: MP31872-SD1 Acquired: 3/28/2017 18:08:07 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 5.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	-0.010	-0.168	-0.011	-0.634	-0.004	32.71	-0.001	-0.000	-0.006	-0.006
Stddev	.0011	.0490	.0017	.0009	.0002	.09	.0001	.001	.0005	.0006
%RSD	106.9	291.3	148.5	1.461	45.18	.2894	72.94	2750.	81.28	100.1

#1	.0000	-.0568	-.0005	-.0634	-.0004	32.81	-.0001	-.0006	-.0005	-.0010
#2	-.0009	.0378	-.0011	-.0625	-.0003	32.62	-.0002	-.0006	-.0002	-.0001
#3	-.0021	-.0315	-.0028	-.0644	-.0007	32.72	-.0000	-.0001	-.0011	-.0007

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	.0092	.4682	1.935	.5609	-.0006	160.8	-.0002	-.0038	-.0049	-.0019
Stddev	.0074	.0899	.038	.0012	.0003	.4	.0005	.0029	.0046	.0031
%RSD	80.30	19.20	1.969	.2192	56.05	.2397	201.9	75.45	93.28	165.2

#1	.0174	.4901	1.891	.5610	-.0004	161.1	-.0008	-.0070	.0027	-.0014
#2	.0069	.3694	1.950	.5597	-.0004	160.4	-.0000	.0015	.0101	-.0048
#3	.0032	.5452	1.963	.5621	-.0010	161.0	-.0001	.0029	.0019	-.0022

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	.1551	-.0006	.0341	-.0034	-.0032	-.0006	-.0100
Stddev	.0090	.0012	.0005	.0002	.0016	.0013	.0004
%RSD	5.821	187.0	1.605	5.029	50.51	206.7	3.781

#1	.1507	-.0006	.0335	-.0033	-.0045	-.0020	.0099
#2	.1655	-.0018	.0346	-.0036	-.0037	-.0005	.0104
#3	.1492	-.0005	.0343	-.0033	-.0014	-.0006	.0097

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2597.4	6115.8	44302.	5622.8
Stddev	4.3	4.2	169.	35.9
%RSD	.16443	.06881	.38116	.63784

#1	2600.6	6117.6	44496.	5591.8
#2	2599.1	6111.0	44216.	5614.5
#3	2592.6	6118.8	44193.	5662.1

Raw Data MA13933 page 165 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: MP31872-S2 Acquired: 3/28/2017 18:16:28 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Avg	.0475	27.08	2.007	2.126	.0535	55.93	.0470	.4653	1.959
Stddev	.0004	.10	.007	.004	.0001	.13	.0002	.0017	.0002
%RSD	.8924	.3704	.3620	.1874	.2517	.2346	.4236	.3601	.1227

#1	.0475	26.97	1.999	2.121	.0533	55.79	.0468	.4634	1.957
#2	.0480	27.13	2.011	2.126	.0535	56.05	.0471	.4664	1.961
#3	.0471	27.15	2.012	2.129	.0536	55.94	.0472	.4662	1.961

Elem	Cu3247	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)
Avg	.2544	27.10	26.76	27.02	1.043	.5555	F167.3	.4884	.5079
Stddev	.0004	.07	.05	.12	.002	.0023	.7	.0018	.0023
%RSD	.1585	.2495	.1812	.4450	.1491	.4111	.4319	.3743	.4471

#1	.2544	27.03	26.71	26.92	1.042	.5529	166.5	.4864	.5056
#2	.2541	27.15	26.80	27.15	1.043	.5568	168.0	.4890	.5101
#3	.2549	27.13	26.77	27.00	1.045	.5568	167.3	.4899	.5079

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	.4985	2.017	.1540	.5272	.6056	.5519	2.026	.4909	.5149
Stddev	.0021	.007	.0011	.0030	.0022	.0001	.004	.0009	.0016
%RSD	.4260	.3509	.7237	.5643	.3555	.0247	.1976	.1910	.3098

#1	.4967	2.009	.1527	.5238	.6032	.5518	2.022	.4899	.5130
#2	.5009	2.022	.1549	.5287	.6074	.5521	2.030	.4912	.5157
#3	.4980	2.019	.1543	.5292	.6061	.5519	2.026	.4917	.5159

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2342.8	5948.2	43136.	5578.6
Stddev	2.4	16.1	217.	7.5
%RSD	.10437	.27053	.50290	1.3457

#1	2345.6	5966.3	43198.	5573.9
#2	2341.9	5942.9	43316.	5574.7
#3	2341.0	5935.5	42895.	5587.3

Raw Data MA13933 page 167 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: MP31872-S1 Acquired: 3/28/2017 18:12:22 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Avg	.0484	27.66	2.063	2.172	.0546	55.86	.0482	.4765	.2017
Stddev	.0004	.08	.006	.009	.0004	.13	.0001	.0009	.0007
%RSD	.8407	.2887	.2992	.4004	.7635	.2276	.1048	.1922	.3551

#1	.0481	27.72	2.056	2.174	.0542	55.88	.0482	.4755	.2010
#2	.0482	27.69	2.064	2.179	.0550	55.97	.0482	.4771	.2016
#3	.0488	27.57	2.068	2.162	.0544	55.72	.0481	.4770	.2025

Elem	Cu3247	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)
Avg	.2611	27.61	27.32	27.63	1.048	.5736	F166.8	.5010	.5216
Stddev	.0002	.03	.10	.08	.003	.0013	1.1	.0012	.0018
%RSD	.0857	.1249	.3830	.2938	.2588	.2320	.6878	.2468	.3546

#1	.2608	27.58	27.36	27.63	1.049	.5721	166.9	.4996	.5197
#2	.2612	27.65	27.40	27.71	1.045	.5740	165.6	.5020	.5217
#3	.2612	27.60	27.20	27.55	1.051	.5747	167.9	.5013	.5234

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	.5109	2.071	.1497	.5441	.6185	.5699	2.081	.5042	.5266
Stddev	.0016	.009	.0026	.0003	.0016	.0011	.004	.0013	.0003
%RSD	.3178	.4461	1.740	.0571	.2536	.1981	.1819	.2508	.0512

#1	.5118	2.061	.1520	.5437	.6194	.5688	2.078	.5028	.5264
#2	.5090	2.073	.1503	.5442	.6194	.5699	2.079	.5045	.5269
#3	.5119	2.079	.1469	.5444	.6167	.5710	2.085	.5053	.5265

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2314.9	5877.7	42477.	5481.3
Stddev	4.0	4.0	86.	6.6
%RSD	.17154	.06732	.20293	.12071

#1	2319.5	5881.7	42476.	5485.5
#2	2312.8	5873.8	42563.	5473.6
#3	2312.5	5877.6	42391.	5484.6

Raw Data MA13933 page 166 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: FA42279-4 Acquired: 3/28/2017 18:20:34 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Avg	.0000	.0006	.0003	.0931	.0001	73.57	.0000	.0000	.0005
Stddev	.000	.0076	.0005	.0007	.0001	.24	.000	.000	.0003
%RSD	1451.	1324.	209.8	.7337	97.95	.3290	324.8	303.2	55.39

#1	.0002	.0041	.0000	.0937	.0000	73.68	.0001	-.0001	.0007
#2	-.0005	-.0082	.0009	.0923	.0000	73.29	-.0001	.0001	.0003
#3	.0002	.0058	-.0001	.0933	.0001	73.73	-.0001	-.0001	.0003

Elem	Cu3247	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)
Avg	.0007	.0111	.3259	2.041	.3128	.0001	F147.9	.0002	.0033
Stddev	.0002	.0007	.0228	.020	.0008	.0003	.9	.0002	.0009
%RSD	26.50	6.713	6.982	.9589	.2642	.275.2	.5903	.79.10	26.39

#1	.0009	.0106	.3112	2.050	.3135	.0005	149.0	.0004	.0039
#2	.0006	.0120	.3522	2.019	.3119	.0000	147.4	.0002	.0036
#3	.0005	.0107	.3145	2.055	.3130	-.0001	147.5	.0001	.0023

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	-.0002	.0011	.2906	-.0002	.0563	.0018	.0006	.0004	-.0010
Stddev	.0001	.0006	.0006	.0003	.0003	.0002	.0008	.0002	.0000
%RSD	43.71	57.27	.2026	126.1	.4906	12.10	135.1	41.58	3.106

#1	-.0002	.0014	.2902	.0001	.0564	.0021	.0012	.0002	.0010
#2	-.0003	.0004	.2904	.0000	.0560	.0017	-.0003	.0006	.0010
#3	-.0001	.0015	.2913	.0005	.0565	.0017	.0008	.0004	.0011

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2397.8	5882.2	42725.	5635.6
Stddev	6.1	11.9	269.	28.6
%RSD	.25590	.		

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Sample Name: FA42274-1 Acquired: 3/28/2017 18:24:55 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Avg	-.0001	-.0066	-.0001	-.0166	-.0000	71.80	-.0002	-.0032	-.0001
Stddev	.0003	.0061	.0002	.0003	.0001	.29	.0001	.0001	.0001
%RSD	224.9	93.30	182.5	1.976	223.1	.4048	32.37	2.556	157.4
#1	-.0004	-.0137	-.0001	-.0169	-.0000	71.53	-.0002	-.0031	-.0000
#2	-.0002	-.0032	-.0002	-.0163	-.0000	71.75	-.0001	-.0032	-.0001
#3	-.0002	-.0028	-.0002	-.0167	-.0001	72.11	-.0002	-.0033	-.0001
Elem	Cu3247	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)
Avg	-.0006	-.0079	.2377	.4456	.0363	-.0002	F144.9	-.0036	-.0028
Stddev	.0001	.0026	.0197	.0069	.0001	.0001	2.3	.0001	.0003
%RSD	15.76	33.08	8.307	1.545	.2204	65.05	1.576	3.671	9.494
#1	.0006	.0053	.2308	.4511	.0364	.0000	144.5	-.0035	.0030
#2	.0007	.0077	.2223	.4379	.0363	-.0002	142.8	-.0036	.0025
#3	.0005	.0106	.2600	.4477	.0364	-.0002	147.3	-.0038	.0028
Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	.0008	.0007	-.1129	-.0002	.2350	.0015	-.0011	-.0002	.5941
Stddev	.0012	.0008	.0008	.0001	.0006	.0000	.0002	.0001	.0004
%RSD	145.5	112.0	.7343	31.16	.2601	1.171	19.53	74.74	.0616
#1	.0021	.0005	.1138	.0002	.2346	.0015	-.0014	-.0001	.5937
#2	-.0002	.0000	.1121	.0002	.2347	.0015	-.0010	-.0002	.5940
#3	.0006	.0016	.1128	.0003	.2357	.0016	-.0010	-.0003	.5945
Int. Std.	In2306	Y_2243	Y_3600	Y_3710					
Avg	2406.4	5909.1	42742.	5571.7					
Stddev	3.1	4.9	50.	40.3					
%RSD	.12730	.08329	.11711	.72301					
#1	2404.2	5913.1	42773.	5616.6					
#2	2409.9	5910.7	42768.	5560.0					
#3	2405.2	5903.6	42684.	5538.6					

Raw Data MA13933 page 169 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: FA42317-1 Acquired: 3/28/2017 18:29:14 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Avg	-.0003	.0205	-.0005	-.0409	-.0001	19.86	.0000	-.0003	-.0016
Stddev	.0001	.0028	.0001	.0003	.0000	.11	.0000	.0001	.0001
%RSD	27.64	13.69	22.22	.7902	93.50	.5561	1222.	27.17	7.125
#1	-.0002	.0185	-.0006	-.0409	.0001	19.74	.0000	.0003	.0015
#2	-.0003	.0193	.0006	-.0406	.0000	19.87	.0000	.0003	.0016
#3	-.0002	.0237	.0004	-.0413	.0000	19.96	.0000	.0002	.0017
Elem	Cu3247	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)
Avg	-.0006	.8330	1.186	6.152	.0595	.2018	F145.8	-.0165	.0016
Stddev	.0003	.0028	.020	.034	.0002	.0003	.8	.0001	.0004
%RSD	46.61	.3390	1.648	.5574	.3626	.1434	.5353	.4778	27.28
#1	.0006	.8298	1.167	6.113	.0595	.2020	145.0	.0166	.0020
#2	.0003	.8350	1.184	6.177	.0598	.2015	146.5	.0164	.0018
#3	.0009	.8342	1.206	6.167	.0593	.2020	145.9	.0165	.0011
Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	.0035	.0011	-.1117	.0003	.0153	.0017	-.0006	-.0005	.3686
Stddev	.0008	.0009	.0008	.0001	.0001	.0001	.0007	.0002	.005
%RSD	22.82	83.48	.6829	37.70	.5201	4.708	107.2	46.70	.1260
#1	.0033	.0020	-.1120	.0004	.0154	.0017	.0001	.0003	.3692
#2	.0044	.0003	.1123	.0004	.0152	.0017	-.0010	.0004	.3683
#3	.0028	.0008	-.1108	.0002	.0153	.0016	-.0011	.0007	.3684
Int. Std.	In2306	Y_2243	Y_3600	Y_3710					
Avg	2420.4	5918.1	43107.	5549.3					
Stddev	6.2	9.1	274.	74.4					
%RSD	.25634	.15319	.63549	1.3414					
#1	2413.3	5909.5	43115.	5629.2					
#2	2423.1	5927.6	42830.	5536.6					
#3	2424.8	5917.3	43377.	5482.0					

Raw Data MA13933 page 170 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: MP31872-D2 Acquired: 3/28/2017 18:33:33 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Avg	.0001	.0003	.0000	.0941	.0000	74.66	.0000	.0000	.0002
Stddev	.0001	.0096	.0005	.0001	.000	.17	.000	.0001	.0002
%RSD	115.5	2775.	1748.	.0955	995.4	.2276	39.85	391.5	108.9
#1	.0000	.0071	-.0003	.0941	-.0001	74.48	-.0001	-.0001	.0004
#2	.0001	.0046	.0005	.0942	.0001	74.69	.0000	.0001	.0000
#3	.0002	-.0107	-.0001	.0941	.0000	74.82	.0000	.0001	.0001
Elem	Cu3247	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)
Avg	.0007	.0023	.2536	2.084	.3157	-.0004	F148.5	.0001	.0021
Stddev	.0003	.0011	.0305	.031	.0005	.0001	1.3	.0001	.0004
%RSD	44.81	45.96	12.04	1.475	.1708	33.32	.8798	122.8	19.68
#1	.0004	.0036	.2800	2.049	.3151	-.0003	147.0	.0000	.0019
#2	.0007	.0018	.2202	2.107	.3159	-.0005	149.4	.0001	.0025
#3	.0010	.0017	.2606	2.097	.3162	-.0004	149.1	.0001	.0018
Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	.0007	.0003	.2892	.0001	.0570	.0016	-.0010	.0000	.0009
Stddev	.0005	.0010	.0010	.0002	.0001	.0001	.0003	.0001	.0001
%RSD	65.95	342.8	.3291	222.9	.2156	4.633	29.42	133.3	8.360
#1	.0007	-.0003	.2888	-.0001	.0569	.0016	-.0007	.0001	.0010
#2	.0003	-.0003	.2886	.0002	.0571	.0015	-.0012	.0001	.0010
#3	.0012	.0014	.2903	.0002	.0569	.0016	-.0012	.0000	.0008
Int. Std.	In2306	Y_2243	Y_3600	Y_3710					
Avg	2389.6	5876.3	42075.	5503.0					
Stddev	9.6	23.7	127.	37.7					
%RSD	.40304	.40367	.30072	.68558					
#1	2395.6	5893.3	42167.	5538.8					
#2	2394.7	5886.4	42127.	5506.5					
#3	2378.5	5849.2	41931.	5463.6					

Raw Data MA13933 page 171 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: MP31872-MB2 Acquired: 3/28/2017 18:37:55 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	-.0010	.0004	.0006	.0001	.0597	.0000	.0000	.0002
Stddev	.0001	.0082	.0004	.0002	.0000	.0004	.000	.0001	.0001
%RSD	94.17	860.1	103.6	44.07	16.22	.5887	79.29	165.4	70.80
#1	.0000	.0031	.0005	.0004	.0001	.0593	-.0001	.0001	.0001
#2	-.0002	-.0104	-.0001	.0008	.0001	.0599	.0000	.0000	.0002
#3	-.0003	.0045	.0007	.0005	.0001	.0599	.0000	.0000	.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									
Elem	Cu3247	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	.0009	.1361	.0048	.0003	-.0002	F137.0	.0000	.0002
Stddev	.0002	.0014	.0112	.0128	.0000	.0001	.8	.0001	.0004
%RSD	32.46	155.9	8.231	268.4	12.11	52.78	.6128	463.7	168.1
#1	.0007	-.0002	.1234	.0151	.0003	-.0002	136.7	.0002	.0002
#2	.0004	.0004	.1444	.0087	.0003	-.0003	137.9	-.0001	-.0002
#3	.0007	.0024	.1406	-.0095	.0004	-.0001	136.3	.0000	.0006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit							2.500		
Low Limit							-2.500		
Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	.0001	.0063	.0003	.0001	.0001	-.0017	.0000	.0017
Stddev	.0006	.0003	.0005	.0001	.0000	.0001	.0008	.0001	.0000
%RSD	215.3	206.1	8.201	26.47	43.92	94.79	49.23	551.4	1.817
#1	.0003	-.0001	.0064	.0003	.0000	.0000	-.0009	.0000	.0017
#2	-.0004	.0004	.0058	.0002	.0001	.0001	-.0016	.0000	.0017
#3	.0009	.0000	.0068	.0004	.0001	.0001	-.0026	.0001	.0017
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

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Sample Name: MP31872-MB2 Acquired: 3/28/2017 18:37:55 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2482.6	6014.0	43244.	5656.8
Stddev	1.3	5.1	70.	38.0
%RSD	.05354	.08541	.16106	.67197
#1	2484.2	6019.4	43304.	5696.5
#2	2482.1	6013.2	43168.	5620.8
#3	2481.7	6009.2	43260.	5653.0

Raw Data MA13933 page 173 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: MP31872-B2 Acquired: 3/28/2017 18:42:20 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2358.1	5977.1	43220.	5560.4
Stddev	3.4	10.5	285.	41.2
%RSD	.14565	.17512	.65853	.74088
#1	2354.3	5970.1	43284.	5522.3
#2	2360.9	5989.2	43468.	5554.8
#3	2359.3	5972.2	42909.	5604.1

Raw Data MA13933 page 175 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: MP31872-B2 Acquired: 3/28/2017 18:42:20 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0469	27.01	2.006	2.065	.0529	25.43	.0473	.4668	.1977
Stddev	.0006	.07	.005	.003	.0001	.03	.0001	.0006	.0009
%RSD	1.334	.2521	.2359	.1635	.2012	.1041	.1874	.1385	.4767
#1	.0466	27.06	2.008	2.062	.0528	25.43	.0474	.4672	.1977
#2	.0466	27.03	2.001	2.066	.0530	25.46	.0473	.4661	.1968
#3	.0476	26.93	2.009	2.069	.0529	25.41	.0473	.4672	.1987

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
Value  
Range

Elem	Cu3247	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2544	26.98	26.74	25.39	.5188	.5553	F170.9	.4892	.5098
Stddev	.0012	.02	.03	.08	.0018	.0011	4.4	.0010	.0006
%RSD	.4636	.0874	.1015	.3166	.3428	.2008	2.548	.2141	.1158
#1	.2551	26.95	26.71	25.46	.5186	.5557	176.0	.4896	.5098
#2	.2550	26.99	26.76	25.42	.5172	.5540	168.1	.4880	.5103
#3	.2530	26.99	26.75	25.30	.5207	.5561	168.7	.4899	.5092

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Fail Chk Pass Chk Pass  
Value  
Range 25.00  
20.00%

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4963	2.014	.0152	.5305	.5702	.5496	2.031	.4915	.5123
Stddev	.0020	.003	.0006	.0007	.0008	.0014	.003	.0005	.0011
%RSD	.4116	.1523	3.944	.1321	.1359	.2600	.1399	.1021	.2060
#1	.4985	2.013	.0157	.5312	.5698	.5506	2.033	.4917	.5123
#2	.4945	2.012	.0153	.5298	.5698	.5480	2.033	.4910	.5113
#3	.4958	2.017	.0145	.5303	.5711	.5502	2.028	.4919	.5134

Check ? Chk Pass Chk Pass None Chk Pass None None Chk Pass Chk Pass Chk Pass  
Value  
Range

Raw Data MA13933 page 174 of 198

[Zoom In](#)  
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Sample Name: CCV Acquired: 3/28/2017 18:46:28 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2469	39.26	1.946	2.043	2.064	39.42	1.900	1.896	1.997	2.017
Stddev	.0013	.07	.003	.002	.003	.11	.004	.004	.003	.003
%RSD	.5071	.1760	.1374	.1097	.1592	.2665	.1963	.1992	.1547	.1541
#1	.2458	39.18	1.946	2.041	2.061	39.31	1.904	1.900	1.998	2.014
#2	.2483	39.31	1.943	2.046	2.068	39.52	1.896	1.893	1.993	2.020
#3	.2467	39.29	1.948	2.044	2.064	39.42	1.900	1.895	1.999	2.017

Check ? Chk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk Pass  
Value  
Range

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	40.74	41.37	40.24	2.099	2.012	39.29	1.966	2.050	1.947	1.945
Stddev	.15	.09	.12	.004	.002	.10	.002	.001	.003	.005
%RSD	.3564	.2253	.3040	.2112	.0760	.2651	.1070	.0473	.1540	.2687
#1	40.62	41.26	40.10	2.102	2.010	39.18	1.968	2.051	1.950	1.950
#2	40.90	41.44	40.29	2.094	2.011	39.38	1.964	2.050	1.947	1.939
#3	40.70	41.41	40.33	2.100	2.013	39.33	1.966	2.049	1.944	1.945

Check ? Chk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk Pass  
Value  
Range

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.953	1.953	2.100	2.069	2.047	2.032	2.035
Stddev	.003	.003	.003	.001	.005	.006	.002
%RSD	.1427	.1691	.1236	.0325	.2671	.2776	.1086
#1	1.956	1.957	2.097	2.069	2.054	2.036	2.034
#2	1.951	1.951	2.102	2.069	2.045	2.026	2.033
#3	1.953	1.951	2.100	2.070	2.043	2.035	2.037

Check ? None Chk PassChk PassChk PassChk PassChk PassChk PassChk Pass  
Value  
Range

Raw Data MA13933 page 176 of 198



[Zoom In](#)  
[Zoom Out](#)

Sample Name: CCV Acquired: 3/28/2017 18:46:28 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2353.5	5945.6	42687.	5472.2
Stddev	3.6	6.0	129.	19.5
%RSD	.15413	.10017	.30294	.35638

#1	2349.5	5945.0	42545.	5493.0
#2	2356.5	5951.8	42799.	5469.4
#3	2354.5	5939.9	42717.	5454.3

Raw Data MA13933 page 177 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: CCB Acquired: 3/28/2017 18:50:25 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2738.5	6261.5	45264.	5564.5
Stddev	3.5	12.0	71.	3.6
%RSD	.12948	.19149	.15639	.06534

#1	2742.3	6274.0	45332.	5562.9
#2	2737.6	6260.4	45190.	5568.6
#3	2735.4	6250.1	45270.	5561.9

Raw Data MA13933 page 179 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: CCB Acquired: 3/28/2017 18:50:25 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	.0072	.0005	.0006	.0004	.0067	.0002	.0002	.0004
Stddev	.0000	.0015	.0007	.0001	.0001	.0038	.0001	.0001	.0003
%RSD	7.761	20.45	128.3	15.75	27.89	56.76	68.23	29.10	69.44

#1	-.0003	.0062	.0001	.0005	.0004	.0083	.0003	.0003	.0006
#2	-.0003	.0065	.0013	.0008	.0005	.0094	.0001	.0002	.0001
#3	-.0004	.0089	.0002	.0006	.0003	.0023	.0001	.0002	.0006

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Elem	Cu3247	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.0182	.0119	.0226	.0004	F.0017	.0439	.0002	.0004
Stddev	.0001	.0023	.0020	.0080	.0000	.0004	.0052	.0000	.0009
%RSD	29.96	12.82	16.94	35.41	7.326	20.35	11.86	26.95	215.5

#1	.0003	.0202	.0111	.0154	.0004	.0021	.0398	.0001	.0010
#2	.0002	.0187	.0104	.0211	.0004	.0017	.0497	.0002	-.0006
#3	.0002	.0156	.0142	.0312	.0003	.0014	.0422	.0002	.0009

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Fail Chk Pass Chk Pass Chk Pass  
High Limit .0010  
Low Limit -.0010

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	-.0005	.0007	.0004	.0003	.0008	-.0001	.0004	.0002
Stddev	.0001	.0004	.0002	.0002	.0000	.0000	.0003	.0001	.0000
%RSD	14.50	79.57	28.41	45.92	8.262	6.118	196.4	35.50	26.31

#1	.0010	-.0004	.0008	.0006	.0003	.0008	.0001	.0005	.0002
#2	.0008	-.0002	.0009	.0004	.0004	.0008	-.0001	.0003	.0002
#3	.0011	-.0009	.0005	.0002	.0003	.0008	-.0005	.0003	.0002

Check ? Chk Pass Chk Pass None Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Raw Data MA13933 page 178 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: CCV Acquired: 3/28/2017 19:35:45 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2470	39.40	1.945	2.062	2.086	39.50	1.895	1.889	1.999	2.025
Stddev	.0009	.08	.001	.011	.009	.09	.003	.003	.004	.001
%RSD	.3640	.2147	.0398	.5332	.4108	.2179	.1629	.1298	.1752	.0691

#1	.2480	39.37	1.944	2.065	2.085	39.51	1.892	1.887	2.003	2.027
#2	.2468	39.50	1.946	2.072	2.094	39.58	1.897	1.891	1.998	2.024
#3	.2463	39.34	1.946	2.050	2.077	39.41	1.897	1.889	1.997	2.025

Check ? Chk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk Pass  
Value Range

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	41.08	41.95	40.79	2.123	2.012	39.63	1.966	2.070	1.938	1.940
Stddev	.15	.17	.10	.005	.003	.12	.002	.007	.004	.002
%RSD	.3700	.3983	.2479	.2162	.1610	.3052	.0952	.3408	.1954	.1239

#1	41.08	42.02	40.86	2.128	2.009	39.64	1.965	2.072	1.934	1.941
#2	41.24	42.06	40.84	2.123	2.014	39.75	1.968	2.063	1.940	1.938
#3	40.93	41.75	40.68	2.118	2.015	39.51	1.966	2.076	1.940	1.942

Check ? Chk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk Pass  
Value Range

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.947	1.954	2.126	2.081	2.067	2.042	2.050
Stddev	.001	.004	.010	.003	.008	.003	.004
%RSD	.0295	.2076	.4788	.1423	.3968	.1485	.1792

#1	1.946	1.949	2.128	2.084	2.067	2.046	2.047
#2	1.947	1.956	2.135	2.079	2.059	2.041	2.049
#3	1.947	1.955	2.115	2.079	2.075	2.040	2.054

Check ? None Chk PassChk PassChk PassChk PassChk PassChk PassChk Pass  
Value Range

Raw Data MA13933 page 180 of 198



◀ Zoom In ▶  
Zoom Out

Sample Name: CCV Acquired: 3/28/2017 19:35:45 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2372.9	6021.8	42901.	5467.6
Stddev	5.0	7.0	79.	24.2
%RSD	.21030	.11640	.18462	.44225
#1	2376.8	6029.8	42835.	5442.6
#2	2374.7	6018.7	42988.	5469.3
#3	2367.3	6016.9	42879.	5490.9

Raw Data MA13933 page 181 of 198

◀ Zoom In ▶  
Zoom Out

Sample Name: CCB Acquired: 3/28/2017 19:39:43 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2759.1	6304.2	45663.	5538.3
Stddev	1.6	13.2	68.	34.8
%RSD	.05752	.20860	.14959	.62884
#1	2760.6	6319.2	45606.	5547.9
#2	2759.2	6294.8	45734.	5567.3
#3	2757.4	6298.5	45709.	5499.6

Raw Data MA13933 page 183 of 198

◀ Zoom In ▶  
Zoom Out

Sample Name: CCB Acquired: 3/28/2017 19:39:43 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0059	.0002	.0007	.0004	.0047	.0001	.0002	.0006
Stddev	.000	.0048	.0004	.0001	.0000	.0012	.0001	.0001	.0001
%RSD	686.3	80.85	255.9	16.50	2.750	24.85	49.40	34.51	14.31
#1	.0003	.0034	.0003	.0007	.0004	.0060	.0002	.0003	.0006
#2	-.0001	.0029	-.0003	.0006	.0004	.0040	.0002	.0002	.0007
#3	-.0003	.0114	.0005	.0008	.0004	.0040	.0001	.0002	.0006

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Elem	Cu3247	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	.0137	.0229	.0213	.0004	F.0016	.0267	.0000	-.0001
Stddev	.0004	.0008	.0397	.0043	.0001	.0004	.0040	.0002	.0004
%RSD	63.30	6.129	173.2	20.02	13.62	27.66	15.01	1093.	268.8
#1	.0005	.0147	-.0082	.0174	.0004	.0020	.0221	.0001	-.0004
#2	.0010	.0133	.0093	.0206	.0005	.0015	.0284	.0001	.0003
#3	.0003	.0132	.0676	.0258	.0004	.0012	.0296	-.0002	-.0003

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Fail Chk Pass Chk Pass Chk Pass  
High Limit .0010  
Low Limit -.0010

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	.0005	.0005	.0005	.0004	.0009	-.0008	.0003	.0003
Stddev	.0006	.0006	.0004	.0000	.0000	.0000	.0003	.0001	.0001
%RSD	63.38	122.3	83.83	7.114	8.365	5.666	41.28	42.96	47.26
#1	.0017	.0008	.0010	.0005	.0004	.0008	-.0012	.0002	.0004
#2	.0006	-.0002	.0004	.0005	.0004	.0008	-.0007	.0004	.0003
#3	.0006	.0009	.0002	.0005	.0004	.0009	-.0005	.0002	.0001

Check ? Chk Pass Chk Pass None Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Raw Data MA13933 page 182 of 198

◀ Zoom In ▶  
Zoom Out

Sample Name: CCV Acquired: 3/28/2017 19:43:59 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2415	38.70	1.917	2.030	2.041	38.85	1.872	1.865	1.951	1.980
Stddev	.0002	.05	.005	.004	.004	.09	.003	.003	.003	.003
%RSD	.0647	.1300	.2533	.2056	.2110	.2425	.1569	.1746	.1525	.1374
#1	.2417	38.74	1.914	2.035	2.043	38.89	1.870	1.862	1.951	1.982
#2	.2414	38.64	1.916	2.026	2.036	38.74	1.870	1.864	1.947	1.981
#3	.2415	38.71	1.923	2.030	2.045	38.91	1.875	1.869	1.953	1.977

Check ? Chk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk Pass  
Value Range

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	40.11	41.31	39.92	2.069	1.974	39.00	1.932	2.030	1.906	1.910
Stddev	.11	.09	.14	.002	.005	.11	.002	.004	.008	.004
%RSD	.2743	.2160	.3512	.1019	.2543	.2903	.0793	.2002	.4254	.2289
#1	40.16	41.41	39.98	2.068	1.970	39.13	1.932	2.031	1.898	1.905
#2	39.99	41.27	39.76	2.068	1.973	38.92	1.931	2.025	1.907	1.909
#3	40.20	41.25	40.03	2.072	1.980	38.96	1.934	2.033	1.914	1.914

Check ? Chk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk Pass  
Value Range

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.917	1.924	2.078	2.020	2.019	1.992	2.013
Stddev	.006	.003	.004	.001	.005	.002	.003
%RSD	.3132	.1370	.1983	.0464	.2497	.0758	.1401
#1	1.912	1.923	2.081	2.020	2.023	1.991	2.012
#2	1.915	1.923	2.074	2.019	2.013	1.994	2.010
#3	1.924	1.927	2.080	2.021	2.021	1.992	2.016

Check ? None Chk PassChk PassChk PassChk PassChk PassChk PassChk Pass  
Value Range

Raw Data MA13933 page 184 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: CCV Acquired: 3/28/2017 19:43:59 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2395.1	6070.2	43831.	5493.3
Stddev	1.9	4.0	106.	28.7
%RSD	.08034	.06513	.24089	.52292
#1	2396.8	6073.2	43914.	5502.0
#2	2395.5	6071.8	43867.	5461.2
#3	2393.0	6065.7	43712.	5516.7

Raw Data MA13933 page 185 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: CCB Acquired: 3/28/2017 19:47:59 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2762.5	6320.4	45866.	5559.2
Stddev	2.2	8.3	29.	31.3
%RSD	.08106	.13141	.06225	.56377
#1	2760.1	6325.9	45895.	5525.4
#2	2764.5	6324.4	45867.	5587.2
#3	2763.0	6310.8	45837.	5564.9

Raw Data MA13933 page 187 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: CCB Acquired: 3/28/2017 19:47:59 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0001	.0000	.0006	.0005	.0083	.0001	.0001	.0004
Stddev	.000	.0073	.0003	.0004	.0000	.0013	.0001	.0000	.0001
%RSD	956.4	5560.	708.0	61.98	2.699	16.02	75.81	25.72	26.36
#1	.0004	-.0023	-.0003	.0010	.0004	.0074	.0002	.0002	.0005
#2	-.0002	.0083	.0003	.0005	.0005	.0098	.0002	.0002	.0004
#3	-.0003	-.0056	.0002	.0003	.0005	.0076	.0000	.0001	.0003

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Elem	Cu3247	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.0187	.0371	.0218	.0004	F.0016	.0232	.0001	.0007
Stddev	.0001	.0009	.0210	.0182	.0001	.0004	.0052	.0001	.0002
%RSD	57.50	4.687	56.70	83.70	13.92	24.60	22.26	284.0	22.67
#1	.0002	.0197	.0611	.0097	.0004	.0019	.0173	.0000	.0008
#2	.0004	.0185	.0286	.0427	.0004	.0018	.0268	.0002	.0006
#3	.0001	.0180	.0217	.0129	.0003	.0012	.0256	.0000	.0005

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Fail Chk Pass Chk Pass Chk Pass  
High Limit .0010  
Low Limit -.0010

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011	.0007	.0003	.0006	.0005	.0009	-.0004	.0003	.0001
Stddev	.0001	.0012	.0001	.0002	.0001	.0001	.0003	.0001	.0001
%RSD	5.945	168.8	41.19	37.16	17.05	11.38	87.75	14.54	72.44
#1	.0010	-.0003	.0004	.0007	.0004	.0010	-.0007	.0003	.0001
#2	.0011	.0020	.0004	.0003	.0005	.0009	-.0002	.0004	.0000
#3	.0011	.0004	.0002	.0007	.0005	.0008	-.0002	.0003	.0001

Check ? Chk Pass Chk Pass None Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Raw Data MA13933 page 186 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: CCV Acquired: 3/28/2017 20:26:49 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2489	40.27	2.003	2.094	2.085	40.43	1.987	1.975	2.046	2.032
Stddev	.0010	.13	.000	.006	.009	.14	.000	.001	.002	.002
%RSD	.4185	.3128	.0038	.2663	.4194	.3510	.0208	.0397	.1078	.0805
#1	.2497	40.13	2.003	2.088	2.076	40.28	1.987	1.974	2.044	2.034
#2	.2494	40.28	2.003	2.095	2.086	40.47	1.987	1.976	2.048	2.033
#3	.2477	40.38	2.003	2.099	2.094	40.56	1.986	1.975	2.045	2.031

Check ? Chk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk Pass  
Value Range

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	40.94	42.57	41.14	2.136	2.053	39.72	2.023	2.085	1.986	1.989
Stddev	.20	.09	.23	.006	.003	.13	.001	.005	.003	.002
%RSD	.4952	.2175	.5710	.2733	.1303	.3285	.0370	.2546	.1602	.1001
#1	40.74	42.47	40.91	2.132	2.051	39.68	2.022	2.084	1.989	1.990
#2	40.93	42.59	41.14	2.142	2.052	39.62	2.023	2.090	1.983	1.989
#3	41.14	42.65	41.38	2.132	2.056	39.87	2.023	2.079	1.987	1.987

Check ? Chk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk PassChk Pass  
Value Range

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.997	2.029	2.123	2.075	2.075	2.070	2.094
Stddev	.002	.001	.006	.005	.007	.002	.001
%RSD	.1068	.0355	.2995	.2449	.3501	.1055	.0259
#1	1.999	2.028	2.116	2.080	2.071	2.069	2.093
#2	1.996	2.029	2.124	2.075	2.084	2.072	2.094
#3	1.995	2.029	2.128	2.070	2.071	2.068	2.094

Check ? None Chk PassChk PassChk PassChk PassChk PassChk PassChk Pass  
Value Range

Raw Data MA13933 page 188 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: CCV Acquired: 3/28/2017 20:26:49 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2318.5	5816.4	42204.	5306.4
Stddev	2.5	2.2	23.	54.1
%RSD	.10627	.03748	.05518	1.0202
#1	2321.1	5815.1	42202.	5365.6
#2	2316.2	5818.9	42181.	5294.1
#3	2318.2	5815.1	42228.	5259.4

Raw Data MA13933 page 189 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: CCB Acquired: 3/28/2017 20:30:46 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2734.7	6212.5	45239.	5446.2
Stddev	1.7	13.8	187.	23.1
%RSD	.06062	.22267	.41351	.42471
#1	2735.9	6223.8	45406.	5443.7
#2	2732.8	6216.7	45036.	5424.5
#3	2735.4	6197.1	45273.	5470.5

Raw Data MA13933 page 191 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: CCB Acquired: 3/28/2017 20:30:46 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	.0130	.0000	.0011	.0009	.0171	.0002	.0002	.0008
Stddev	.0001	.0094	.0005	.0002	.0000	.0018	.0001	.0001	.0002
%RSD	120.1	72.56	909.9	18.75	2.674	10.29	47.85	44.29	18.98
#1	.0000	.0032	.0006	.0011	.0010	.0191	.0004	.0004	.0009
#2	-.0002	.0220	-.0001	.0013	.0009	.0163	.0002	.0002	.0008
#3	-.0001	.0137	-.0003	.0009	.0009	.0159	.0001	.0002	.0006

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Elem	Cu3247	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	.0299	.0827	.0277	.0007	F.0017	.1500	.0003	.0005
Stddev	.0002	.0059	.0099	.0122	.0001	.0004	.0060	.0001	.0004
%RSD	44.59	19.62	11.96	44.16	14.43	25.02	3.981	38.73	79.86
#1	.0007	.0367	.0919	.0164	.0007	.0022	.1433	.0004	.0007
#2	.0003	.0264	.0722	.0260	.0007	.0016	.1520	.0002	.0000
#3	.0004	.0267	.0841	.0406	.0005	.0014	.1547	.0002	.0006

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Fail Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015	.0010	.0004	.0006	.0009	.0010	.0004	.0004	.0003
Stddev	.0008	.0010	.0005	.0000	.0001	.0001	.0004	.0001	.0001
%RSD	52.98	102.7	132.7	6.243	7.961	12.40	93.87	17.26	18.29
#1	.0023	.0018	.0010	.0006	.0010	.0011	.0000	.0003	.0003
#2	.0007	.0012	.0003	.0007	.0009	.0010	.0006	.0004	.0003
#3	.0015	-.0001	.0000	.0006	.0008	.0009	.0006	.0003	.0002

Check ? Chk Pass Chk Pass None Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Raw Data MA13933 page 190 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: CRIA Acquired: 3/28/2017 20:35:01 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)	(Y_3600)
Avg	.0080	.2055	.0094	.2065	.0054	1.029	.0051	.0507	.0105	.0268
Stddev	.0005	.0036	.0003	.0008	.0001	.008	.0000	.0001	.0002	.0000
%RSD	6.244	1.763	2.721	.4028	1.440	.7668	.6225	.2944	1.584	.0952
#1	.0084	.2083	.0097	.2057	.0053	1.020	.0051	.0508	.0105	.0268
#2	.0074	.2068	.0092	.2065	.0054	1.033	.0051	.0506	.0104	.0269
#3	.0081	.2014	.0093	.2073	.0053	1.034	.0051	.0508	.0107	.0269

Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)
Avg	.3263	10.79	5.320	.0163	.0530	10.35	.0414	.0054	.0062	.0088
Stddev	.0022	.04	.067	.0000	.0001	.04	.0002	.0004	.0003	.0020
%RSD	.6816	.3514	1.263	.1106	.2196	.4125	.3895	6.845	5.239	22.76
#1	.3269	10.77	5.260	.0163	.0529	10.30	.0416	.0056	.0064	.0069
#2	.3282	10.78	5.393	.0163	.0530	10.37	.0413	.0056	.0063	.0109
#3	.3239	10.84	5.307	.0163	.0531	10.38	.0414	.0050	.0058	.0087

Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	.0186	.0542	.0105	.0107	.0089	.0502	.0217
Stddev	.0002	.0004	.0001	.0001	.0007	.0002	.0001
%RSD	1.305	.6696	.6385	1.010	8.356	.4572	.5555
#1	.0188	.0544	.0106	.0106	.0097	.0501	.0218
#2	.0185	.0537	.0104	.0108	.0087	.0505	.0216
#3	.0184	.0544	.0106	.0106	.0083	.0500	.0216

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Avg	2619.5	6107.4	44372.	5412.8
Stddev	2.6	13.2	150.	51.3
%RSD	.09811	.21617	.33713	.94814
#1	2621.6	6118.4	44508.	5470.7
#2	2620.3	6110.9	44396.	5394.9
#3	2616.6	6092.8	44212.	5372.8

Raw Data MA13933 page 192 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: ICSA Acquired: 3/28/2017 20:39:11 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Avg	.0002	489.5	.0030	-.0002	-.0001	473.9	-.0013	-.0001	-.0008
Stddev	.0002	1.7	.0007	.0001	.0001	3.1	.0001	.0001	.0001
%RSD	110.8	.3531	23.78	86.93	96.66	.6619	7.803	128.7	10.37
#1	-.0001	487.8	-.0038	-.0003	-.0001	477.3	-.0013	-.0000	-.0007
#2	.0003	491.2	.0029	-.0002	.0000	471.1	-.0015	-.0002	.0009
#3	.0004	489.5	.0023	-.0002	.0001	473.4	-.0012	-.0002	.0007
Elem	Cu3247	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)
Avg	.0001	183.1	.1780	F500.6	-.0001	.0010	-.2957	-.0007	.0027
Stddev	.0003	.2	.0275	.9	.0000	.0002	.0198	.0001	.0007
%RSD	461.0	.1060	15.46	.1864	39.93	22.37	6.696	19.26	26.80
#1	-.0002	182.9	.2062	499.6	.0001	.0013	-.3145	-.0006	.0030
#2	.0003	183.2	.1765	500.8	.0001	.0008	.2751	.0007	.0019
#3	.0000	183.3	.1512	501.4	.0001	.0010	.2976	-.0008	.0032
Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	-.0006	-.0004	.0130	-.0036	.0014	-.0003	-.0019	-.0000	-.0016
Stddev	.0002	.0020	.0006	.0007	.0004	.0001	.0013	.000	.0000
%RSD	42.81	524.0	4.842	18.84	28.87	45.93	64.88	852.8	2.087
#1	-.0003	.0019	.0135	.0040	.0010	-.0001	-.0034	-.0003	.0015
#2	-.0008	-.0017	.0133	.0028	.0018	-.0004	-.0015	-.0000	.0015
#3	-.0005	-.0014	.0123	.0038	.0015	-.0002	-.0010	-.0003	.0016
Int. Std.	In2306	Y_2243	Y_3600	Y_3710					
Avg	2105.7	5520.1	39453.	5270.9					
Stddev	7.1	14.3	86.	28.4					
%RSD	.33718	.25816	.21749	.53855					
#1	2100.6	5525.3	39362.	5303.5					
#2	2113.8	5531.1	39532.	5251.7					
#3	2102.6	5504.0	39466.	5257.5					

Raw Data MA13933 page 193 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: ICSAB Acquired: 3/28/2017 20:43:32 Type: Unk  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3600)
Avg	F.9025	493.5	1.033	.5089	.4930	462.3	.8748	.4379	.4838
Stddev	.0037	7.0	.002	.0012	.0024	7.3	.0018	.0009	.0011
%RSD	.4057	1.423	.1971	.2348	.4920	1.585	.2087	.2100	.2250
#1	.9065	501.4	1.030	.5089	.4943	470.7	.8735	.4368	.4840
#2	.9017	488.0	1.034	.5101	.4945	457.9	.8741	.4382	.4848
#3	.8993	491.1	1.034	.5077	.4902	458.2	.8769	.4386	.4827
Elem	Cu3247	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
IS Ref	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(Y_2243)	(In2306)
Avg	.5130	179.7	-.1040	F504.6	.4948	.9557	.2271	-.9040	.9705
Stddev	.0005	.8	.0153	1.7	.0006	.0026	.0051	.0018	.0056
%RSD	.0959	.4192	14.69	.3354	.1206	.2731	2.233	.2046	.5758
#1	.5135	179.8	.0864	505.1	.4946	.9531	.2241	.9036	.9657
#2	.5127	180.4	.1132	506.0	.4954	.9557	.2329	.9024	.9693
#3	.5127	178.9	.1124	502.7	.4943	.9583	.2242	.9061	.9766
Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
IS Ref	(Y_2243)	(Y_2243)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3600)	(In2306)	(Y_3600)	(Y_2243)
Avg	.9580	.9524	.0703	.8927	1.031	.9824	.9513	.4674	.9351
Stddev	.0014	.0026	.0011	.0013	.005	.0023	.0018	.0010	.0023
%RSD	.1453	.2755	1.631	.1425	.4714	.2377	.1940	.2042	.2457
#1	.9564	.9498	.0691	.8914	1.031	.9850	.9510	.4681	.9344
#2	.9586	.9550	.0704	.8928	1.036	.9818	.9497	.4678	.9332
#3	.9590	.9525	.0714	.8939	1.027	.9804	.9533	.4663	.9377
Int. Std.	In2306	Y_2243	Y_3600	Y_3710					
Avg	2058.1	5513.5	39282.	5210.3					
Stddev	2.7	2.9	90.	5.3					
%RSD	.12974	.05298	.23016	.10180					
#1	2058.6	5515.5	39263.	5204.2					
#2	2060.5	5514.8	39203.	5212.4					
#3	2055.2	5510.1	39381.	5214.2					

Raw Data MA13933 page 194 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: CCV Acquired: 3/28/2017 20:47:48 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2470	39.48	1.955	2.043	2.042	39.53	1.933	1.924	2.013	2.006
Stddev	.0015	.12	.003	.007	.001	.08	.005	.004	.006	.006
%RSD	.6192	.2997	.1539	.3251	.0589	.1956	.2809	.1863	.2839	.3211
#1	.2453	39.36	1.953	2.042	2.044	39.45	1.931	1.923	2.011	2.003
#2	.2483	39.59	1.954	2.050	2.041	39.61	1.929	1.922	2.019	2.013
#3	.2473	39.47	1.959	2.037	2.042	39.54	1.939	1.928	2.008	2.001
Check ?	Chk	Pass	Chk	Pass	Chk	Pass	Chk	Pass	Chk	Pass
Value										
Range										
Elem	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	40.31	41.78	40.33	2.099	2.012	39.60	1.980	2.052	1.942	1.948
Stddev	.05	.09	.12	.005	.006	.09	.005	.003	.004	.004
%RSD	.1261	.2174	.3003	.2272	.2988	.2379	.2521	.1674	.1806	.1925
#1	40.25	41.71	40.19	2.097	2.007	39.56	1.978	2.051	1.943	1.947
#2	40.35	41.89	40.38	2.105	2.010	39.70	1.976	2.048	1.945	1.945
#3	40.32	41.75	40.41	2.096	2.018	39.53	1.985	2.055	1.938	1.952
Check ?	Chk	Pass	Chk	Pass	Chk	Pass	Chk	Pass	Chk	Pass
Value										
Range										
Elem	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062			
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm			
Avg	1.951	1.978	2.091	2.062	2.047	2.037	2.047			
Stddev	.002	.005	.002	.008	.010	.004	.007			
%RSD	.0776	.2559	.1032	.3963	.4885	.1850	.3284			
#1	1.950	1.975	2.093	2.055	2.050	2.037	2.043			
#2	1.951	1.975	2.093	2.071	2.036	2.041	2.044			
#3	1.953	1.984	2.089	2.060	2.055	2.034	2.055			
Check ?	None	Chk	Pass	Chk	Pass	Chk	Pass	Chk	Pass	Pass
Value										
Range										

Raw Data MA13933 page 195 of 198

[Zoom In](#)  
[Zoom Out](#)

Sample Name: CCV Acquired: 3/28/2017 20:47:48 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2357.6	5934.1	42644.	5380.0
Stddev	7.3	14.9	254.	36.8
%RSD	.31164	.25073	.59461	.68464
#1	2358.8	5940.5	42817.	5422.5
#2	2364.3	5944.7	42353.	5359.7
#3	2349.8	5917.0	42763.	5357.7

Raw Data MA13933 page 196 of 198

Sample Name: CCB Acquired: 3/28/2017 20:51:46 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Elem	Ag3280	Al3961	As1890	Ba4554	Be3130	Ca3179	Cd2265	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0139	.0009	.0007	.0005	.0227	.0001	.0001	.0003
Stddev	.0003	.0048	.0008	.0001	.0000	.0010	.0000	.0001	.0002
%RSD	919.7	34.34	88.01	7.679	9.326	4.325	49.69	107.5	58.54
#1	.0004	.0176	.0012	.0007	.0005	.0239	.0001	.0002	.0003
#2	-.0002	.0157	.0014	.0006	.0005	.0222	.0001	.0000	.0001
#3	.0000	.0085	.0000	.0007	.0004	.0221	.0001	.0000	.0005

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Elem	Cu3247	Fe2599	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.0251	.0360	.0314	.0004	F.0017	.0553	-.0001	.0001
Stddev	.0001	.0021	.0215	.0199	.0000	.0003	.0078	.0001	.0006
%RSD	28.66	8.569	59.80	63.52	9.034	17.03	14.12	173.6	741.5
#1	.0003	.0275	.0358	.0477	.0004	.0021	.0508	.0000	.0001
#2	.0005	.0235	.0145	.0092	.0004	.0016	.0507	.0000	-.0005
#3	.0004	.0243	.0575	.0373	.0003	.0015	.0643	-.0002	.0006

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Fail Chk Pass Chk Pass Chk Pass  
High Limit .0010  
Low Limit -.0010

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Ti1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	-.0001	.0001	.0005	.0003	.0008	-.0008	.0004	.0002
Stddev	.0006	.0010	.0002	.0001	.0000	.0002	.0006	.0003	.0001
%RSD	142.4	670.7	326.3	28.34	4.983	20.03	75.70	63.47	48.94
#1	-.0002	.0008	-.0001	.0004	.0003	.0009	-.0002	.0006	.0003
#2	.0011	-.0002	.0000	.0006	.0003	.0009	-.0009	.0005	.0002
#3	.0005	-.0011	.0003	.0006	.0004	.0006	-.0014	.0001	.0001

Check ? Chk Pass Chk Pass None Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Raw Data MA13933 page 197 of 198

Sample Name: CCB Acquired: 3/28/2017 20:51:46 Type: QC  
Method: 60102007\_041712(v608) Mode: CONC Corr. Factor: 1.000000  
User: admin SSTRACE02: Custom ID2: Custom ID3:  
Comment:

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2726.1	6178.9	44971.	5390.1
Stddev	4.0	10.1	213.	11.5
%RSD	.14702	.16372	.47301	.21254
#1	2729.9	6190.2	44830.	5395.3
#2	2726.5	6175.9	45216.	5376.9
#3	2721.9	6170.7	44867.	5398.0

Raw Data MA13933 page 198 of 198

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Ag 328.068 {103}	<input checked="" type="checkbox"/>	3	V	0.009834	0.000000	No
			Fe	0.000001	0.000000	No
			Mg	0.000002	0.000000	No
Al 396.152 { 85}	<input checked="" type="checkbox"/>	1	Mo	0.035224	0.000000	No
As 189.042 {478}	<input checked="" type="checkbox"/>	5	Fe	0.000051	0.000000	No
			Cr	0.000226	0.000000	No
			Mo	0.000017	0.000000	No
			Al	0.000004	0.000000	No
			Ca	0.000002	0.000000	No
Ba 455.403 { 74}	<input checked="" type="checkbox"/>	1	Fe	0.000024	0.000000	No
Be 313.042 {108}	<input checked="" type="checkbox"/>	2	V	0.000115	0.000000	No
			Ti	0.000059	0.000000	No
Ca 317.933 {106}	<input checked="" type="checkbox"/>	None				
Cd 226.502 {449}	<input checked="" type="checkbox"/>	4	Fe	0.000050	0.000000	No
			Ca	0.000001	0.000000	No
			Al	0.000001	0.000000	No
			Ti	0.000151	0.000000	No
Co 228.616 {447}	<input checked="" type="checkbox"/>	3	Mo	0.001220	0.000000	No
			Ti	0.003012	0.000000	No
			Fe	0.000006	0.000000	No
Cr 267.716 {126}	<input checked="" type="checkbox"/>	3	Al	0.000005	0.000000	No
			Fe	0.000001	0.000000	No
			Ca	0.000002	0.000000	No
Cu 324.754 {104}	<input checked="" type="checkbox"/>	10	Fe	0.000137	0.000000	No
			Ca	0.000002	0.000000	No
			Mo	0.000528	0.000000	No
			Sn	0.000012	0.000000	No
			V	0.000158	0.000000	No
			Ti	0.000251	0.000000	No
			Al	0.000004	0.000000	No
			Mg	0.000002	0.000000	No
			Co	0.000787	0.000000	No
			Cd	0.000240	0.000000	No
Fe 259.940 {130}	<input checked="" type="checkbox"/>	None				
In 230.606 {446}*	<input checked="" type="checkbox"/>	None				
K 766.490 { 44}	<input checked="" type="checkbox"/>	None				
Mg 279.079 {121}	<input checked="" type="checkbox"/>	None				
Mn 257.610 {131}	<input checked="" type="checkbox"/>	2	Fe	0.000009	0.000000	No
			Mg	0.000001	0.000000	No
Mo 202.030 {467}	<input checked="" type="checkbox"/>	1	Fe	0.000017	0.000000	No
Na 589.592 { 57}	<input checked="" type="checkbox"/>	None				
Ni 231.604 {445}	<input checked="" type="checkbox"/>	7	Fe	0.000023	0.000000	No
			Co	0.000054	0.000000	No
			Mo	0.000005	0.000000	No
			Sb	0.000120	0.000000	No
			Al	0.000003	0.000000	No
			Be	0.000269	0.000000	No
			Ti	0.000440	0.000000	No
Pb 220.353 {453}	<input checked="" type="checkbox"/>	9	Al	0.000261	0.000000	No
			Fe	0.000123	0.000000	No
			Mo	0.001012	0.000000	No
			Cu	0.001070	0.000000	No
			Ti	0.000036	0.000000	No
			Si	0.000071	0.000000	No
			Ca	0.000005	0.000000	No
			Cr	0.000050	0.000000	No
			Mg	0.000004	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Sb 206.833 {463}	<input checked="" type="checkbox"/>	10	Fe	0.000007	0.000000	No
			Cr	0.012140	0.000000	No
			Mo	0.004076	0.000000	No
			V	0.000611	0.000000	No
			Sn	0.010736	0.000000	No
			Ti	0.000040	0.000000	No
			Ca	0.000004	0.000000	No
			Ni	0.000438	0.000000	No
			Mg	0.000002	0.000000	No
			Al	0.000003	0.000000	No
Se 196.090 {472}	<input checked="" type="checkbox"/>	10	Fe	0.000063	0.000000	No
			Ca	0.000001	0.000000	No
			Mn	0.000574	0.000000	No
			Mo	0.000111	0.000000	No
			Al	0.000024	0.000000	No
			V	0.000000	0.000000	No
			Zn	0.000000	0.000000	No
			Sr	0.000137	0.000000	No
			As	0.000032	0.000000	No
			Be	0.000212	0.000000	No
Si 212.412 {459}	<input checked="" type="checkbox"/>	1	Mo	0.019120	0.000000	No
Sn 189.989 {477}	<input checked="" type="checkbox"/>	None				
Sr 407.771 { 83}	<input checked="" type="checkbox"/>	1	Ca	0.000102	0.000000	No
Ti 334.941 {101}	<input checked="" type="checkbox"/>	1	Ca	0.000006	0.000000	No
Ti 190.856 {477}	<input checked="" type="checkbox"/>	11	Co	0.001145	0.000000	No
			Fe	0.000015	0.000000	No
			Al	0.000011	0.000000	No
			Ba	0.000051	0.000000	No
			Ti	0.002651	0.000000	No
			Sb	0.000012	0.000000	No
			Ca	0.000003	0.000000	No
			Cr	0.000230	0.000000	No
			Mg	0.000003	0.000000	No
			Mn	0.000818	0.000000	No
			V	0.038621	0.000000	No
V 292.402 {115}	<input checked="" type="checkbox"/>	5	Fe	0.000009	0.000000	No
			Cr	0.002590	0.000000	No
			Mo	0.005797	0.000000	No
			Ti	0.000364	0.000000	No
			Mn	0.000693	0.000000	No
Y 224.306 {450}*	<input checked="" type="checkbox"/>	None				
Y 360.073 { 94}*	<input checked="" type="checkbox"/>	None				
Y 371.030 { 91}*	<input checked="" type="checkbox"/>	None				
Zn 206.200 {463}	<input checked="" type="checkbox"/>	5	Cr	0.000965	0.000000	No
			Al	0.000005	0.000000	No
			Ca	0.000003	0.000000	No
			Fe	0.000046	0.000000	No
			As	0.001128	0.000000	No

Element, Wavelength and Order	Date of Fit	Date of Cal.	Type of Fit	Weighting	A0	A1	A2	n (Exponent)
Ag 328.068 {103}	3/28/2017 9:20:24	3/28/2017 8:37:17	Linear	1/Conc	0.000642	0.514679	0.000000	1.000000
Al 396.152 { 85}	3/28/2017 9:20:24	3/28/2017 8:37:17	Linear	1/Conc	0.004102	0.154662	0.000000	1.000000
As 189.042 {478}	3/28/2017 9:20:24	3/28/2017 8:37:17	Linear	1/Conc	-0.000181	0.226344	0.000000	1.000000
Ba 455.403 { 74}	3/28/2017 9:20:24	3/28/2017 8:37:17	Linear	1/Conc	0.017165	9.858170	0.000000	1.000000
Be 313.042 {108}	3/28/2017 9:20:24	3/28/2017 8:37:17	Linear	1/Conc	0.000707	8.041292	0.000000	1.000000
Ca 317.933 {106}	3/28/2017 9:20:24	3/28/2017 8:37:17	Linear	1/Conc	0.005026	0.267858	0.000000	1.000000
Cd 226.502 {449}	3/28/2017 9:20:24	3/28/2017 8:37:17	Linear	1/Conc	0.000750	4.990082	0.000000	1.000000
Co 228.616 {447}	3/28/2017 9:20:24	3/28/2017 8:37:17	Linear	1/Conc	0.000254	2.378537	0.000000	1.000000
Cr 267.716 {126}	3/28/2017 9:20:24	3/28/2017 8:37:17	Linear	1/Conc	0.000230	0.457834	0.000000	1.000000
Cu 324.754 {104}	3/28/2017 9:20:24	3/28/2017 8:37:17	Linear	1/Conc	0.003448	0.679581	0.000000	1.000000
Fe 259.940 {130}	3/28/2017 9:20:24	3/28/2017 8:37:17	Linear	1/Conc	0.001986	0.162793	0.000000	1.000000
In 230.606 {446}*	3/28/2017 9:20:24	5/5/2010 12:30:54	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
K 766.490 { 44}	3/28/2017 9:20:24	3/28/2017 8:37:17	Linear	1/Conc	-0.003072	0.117963	0.000000	1.000000
Mg 279.079 {121}	3/28/2017 9:20:24	3/28/2017 8:37:17	Linear	1/Conc	-0.000179	0.027298	0.000000	1.000000
Mn 257.610 {131}	3/28/2017 9:20:24	3/28/2017 8:37:17	Linear	1/Conc	0.000229	2.524910	0.000000	1.000000
Mo 202.030 {467}	3/28/2017 9:20:24	3/28/2017 8:37:17	Linear	1/Conc	0.001249	1.067599	0.000000	1.000000
Na 589.592 { 57}	3/28/2017 9:20:24	3/28/2017 8:37:17	Linear	1/Conc	-0.013022	0.394250	0.000000	1.000000
Ni 231.604 {445}	3/28/2017 9:20:24	3/28/2017 8:37:17	Linear	1/Conc	-0.000768	1.454093	0.000000	1.000000
Pb 220.353 {453}	3/28/2017 9:20:24	3/28/2017 8:37:17	Linear	1/Conc	0.001064	1.106007	0.000000	1.000000
Sb 206.833 {463}	3/28/2017 9:20:24	3/28/2017 8:37:17	Linear	1/Conc	0.000248	0.255264	0.000000	1.000000
Se 196.090 {472}	3/28/2017 9:20:24	3/28/2017 8:37:17	Linear	1/Conc	-0.001341	0.161142	0.000000	1.000000
Si 212.412 {459}	3/28/2017 9:20:24	3/28/2017 8:37:17	Linear	1/Conc	0.003630	0.352425	0.000000	1.000000
Sn 189.989 {477}	3/28/2017 9:20:24	3/28/2017 8:37:17	Linear	1/Conc	0.000409	0.545773	0.000000	1.000000
Sr 407.771 { 83}	3/28/2017 9:20:24	3/28/2017 8:37:17	Linear	1/Conc	0.000154	14.143823	0.000000	1.000000
Ti 334.941 {101}	3/28/2017 9:20:24	3/28/2017 8:37:17	Linear	1/Conc	0.001874	1.528938	0.000000	1.000000
Tl 190.856 {477}	3/28/2017 9:20:24	3/28/2017 8:37:17	Linear	1/Conc	-0.003318	0.519238	0.000000	1.000000
V 292.402 {115}	3/28/2017 9:20:24	3/28/2017 8:37:17	Linear	1/Conc	-0.000113	0.654237	0.000000	1.000000
Y 224.306 {450}*	<not fit>	<Never Calibrated>	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
Y 360.073 { 94}*	<not fit>	<Never Calibrated>	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
Y 371.030 { 91}*	<not fit>	<Never Calibrated>	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
Zn 206.200 {463}	3/28/2017 9:20:24	3/28/2017 8:37:17	Linear	1/Conc	0.002657	2.982293	0.000000	1.000000



Element, Wavelength and Order	Correlation	Std Error of Est	Predicted MDL	Predicted MQL	Status	Reslope		QC Norm	
						Slope	Y-int	Slope factor	Offset
Ag 328.068 {103}	0.999981	0.000030	0.000405	0.001351	OK.	1.000000	0.000000	1	0
Al 396.152 { 85}	0.999774	0.005302	0.009348	0.031159	OK.	1.000000	0.000000	1	0
As 189.042 {478}	0.999963	0.000156	0.000653	0.002176	OK.	1.000000	0.000000	1	0
Ba 455.403 { 74}	0.999964	0.006779	0.000196	0.000652	OK.	1.000000	0.000000	1	0
Be 313.042 {108}	0.999839	0.011620	0.000075	0.000249	OK.	1.000000	0.000000	1	0
Ca 317.933 {106}	0.999675	0.011007	0.002719	0.009064	OK.	1.000000	0.000000	1	0
Cd 226.502 {449}	0.999891	0.005936	0.000045	0.000151	OK.	1.000000	0.000000	1	0
Co 228.616 {447}	0.999884	0.002918	0.000102	0.000341	OK.	1.000000	0.000000	1	0
Cr 267.716 {126}	0.999904	0.000512	0.000285	0.000950	OK.	1.000000	0.000000	1	0
Cu 324.754 {104}	0.999975	0.000388	0.000283	0.000942	OK.	1.000000	0.000000	1	0
Fe 259.940 {130}	0.999240	0.010230	0.002283	0.007611	OK.	1.000000	0.000000	1	0
In 230.606 {446}*	0.000000	0.000000	1.000000	1.000000	Warnin	1.000000	0.000000	1	0
K 766.490 { 44}	0.999793	0.003871	0.024135	0.080450	OK.	1.000000	0.000000	1	0
Mg 279.079 {121}	0.999691	0.001093	0.017055	0.056849	OK.	1.000000	0.000000	1	0
Mn 257.610 {131}	0.999753	0.004518	0.000045	0.000151	OK.	1.000000	0.000000	1	0
Mo 202.030 {467}	0.999750	0.001924	0.000141	0.000470	OK.	1.000000	0.000000	1	0
Na 589.592 { 57}	0.999707	0.015384	0.007380	0.024602	OK.	1.000000	0.000000	1	0
Ni 231.604 {445}	0.999864	0.001931	0.000163	0.000543	OK.	1.000000	0.000000	1	0
Pb 220.353 {453}	0.999996	0.000240	0.000520	0.001734	OK.	1.000000	0.000000	1	0
Sb 206.833 {463}	0.999959	0.000186	0.000937	0.003122	OK.	1.000000	0.000000	1	0
Se 196.090 {472}	0.999969	0.000102	0.001411	0.004704	OK.	1.000000	0.000000	1	0
Si 212.412 {459}	0.996266	0.002507	0.000485	0.001617	OK.	1.000000	0.000000	1	0
Sn 189.989 {477}	0.999917	0.000567	0.000230	0.000766	OK.	1.000000	0.000000	1	0
Sr 407.771 { 83}	0.999781	0.023871	0.000085	0.000284	OK.	1.000000	0.000000	1	0
Ti 334.941 {101}	0.999875	0.001948	0.000128	0.000425	OK.	1.000000	0.000000	1	0
Tl 190.856 {477}	0.999948	0.000410	0.000712	0.002375	OK.	1.000000	0.000000	1	0
V 292.402 {115}	0.999899	0.000743	0.000257	0.000858	OK.	1.000000	0.000000	1	0
Y 224.306 {450}*	0.000000	0.000000	1.000000	1.000000	Warnin	1.000000	0.000000	1	0
Y 360.073 { 94}*	0.000000	0.000000	1.000000	1.000000	Warnin	1.000000	0.000000	1	0
Y 371.030 { 91}*	0.000000	0.000000	1.000000	1.000000	Warnin	1.000000	0.000000	1	0
Zn 206.200 {463}	0.999819	0.004575	0.000056	0.000187	OK.	1.000000	0.000000	1	0

DOD (ms)

Dry  
Sieve

SGS Accutest - Orlando

Metals Digestion Log Soil

MP #: 31871

Method of Digestion: SW846-3050B

Prep Date/Time (mm/dd/yy 24:00): 03/28/17; 10:04

HotBlock I.D. 6

Thermometer I.D. 6071

Correction Factor (°C) -1

Temperature Observed/Corrected (°C) 89 1.88

Balance I.D. ADVPRO 6

Added<sup>B</sup>: H<sub>2</sub>O<sub>2</sub> HNO<sub>3</sub>

Lot# 165720 0000162027

Spk. Sol. A Volume Used (ml) Pipette #

ACC 997 0.50 0003294

ACC 978 0.25 0003294

W15670 0.25 0003294

Filter Lot#: 140320114

Dig. Tube Lot# 1610138

HCL PTFE Boiling Chips

0000132880 5941-6E49

Sample #	Wt., g	Final Volume (ml)	Comments
Method Blank (MB)	1.0	50.0	
Spike Blank (SB)	↓		
Matrix Spike (MS)	1.24		
Matrix Spike Dup (MSD)	1.14		
Duplicate (DUP)	1.11		
1 QC <sup>C</sup> FA42067-5	1.09		
2 D2-FA42067-5	1.01		
3 FA42067-1	1.09		
4 ↓ -2	1.33		
5 ↓ -3	1.27		
6 ↓ -4	1.36		
7 ↓ -6	1.08		
8 ↓ -7	1.15		
9 FA42152-1	1.22		
10 ↓ -2	1.08		
11 ↓ -3	1.40		
12 ↓ -9	1.13		
13			
14			
15			
16			
17			
18			
19			
20			
21 <sup>E</sup>			
22 <sup>E</sup>			
23 <sup>E</sup>			
24 <sup>E</sup>			

Analyst:

Date: 03/28/17

QC Review:

Date: 3.28.17

A Used for SB, MS, MSD

B For reagent volumes used consult SOP MET 104, current revision

C Parent sample used to prepare MS, MSD, DUP

D Bottle Number

E Additional Matrix QC

icpsolidigestionlog 0316.xls

Rev 03/04/16 DM

3 of 100

## General Chemistry

### QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

DUPLICATE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: FA42152  
Account: CAPEGAA - Cape Environmental Management Inc.  
Project: OB/OD Site I, OB Site II, Fort Bliss, TX

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
pH	GN74604	FA42152-1A	su	8.18	8.15	0.4	0-10%

Associated Samples:  
Batch GN74604: FA42152-1A, FA42152-2A, FA42152-3A, FA42152-9A  
(\*) Outside of QC limits

General Chemistry

Raw Data

